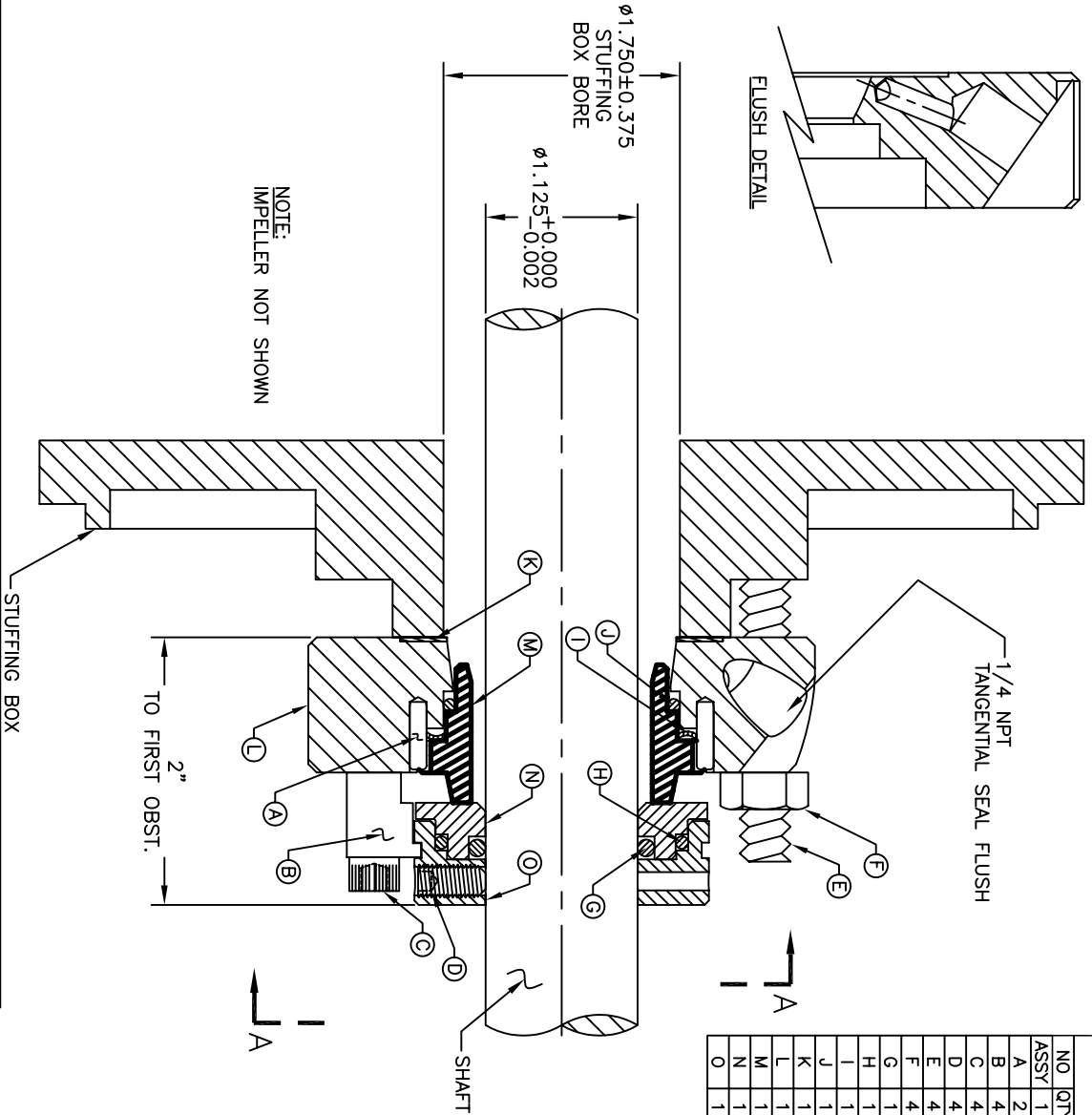
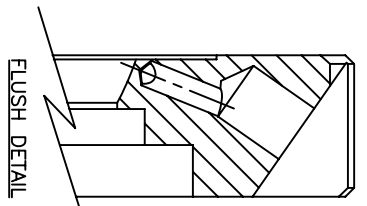


SEAL SIZE - 1 1/8

TYPE - ZN

**BILL OF MATERIAL**

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	--	---	ZN1125R1	1
A	2	DOWEL PIN 1/8 X 1/2	1/2	---	---	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	HEX BOLT 3/8-16 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 3/8-16 UNC	--	316 S.S.	---	1
G	1	SHAFT O-RING	--	VITON	-216	1
H	1	ROTARY MOUNT O-RING	--	VITON	-131	1
I	1	WAVE SPRING	--	17-7 PH	WS1125ZA/N	1
J	1	STATIONARY O-RING	--	VITON	-129	1
K	1	1-5/8X2-3/8 GLAND GASKET	--	TEFLON	GTZN1125GLD	1
L	1	ZN R1 GLAND	--	316L	ZN1125GR1	3
M	1	STATIONARY	--	SIC/CBN	ZA1125BR2	5
N	1	ROTARY INSERT	--	SIC	ZA1125AR4	6
O	1	ROTARY COLLAR	--	316L	ZA1125A1R4	4



NOTE:  
IMPELLER NOT SHOWN

2"  
TO FIRST OBST.

STUFFING BOX

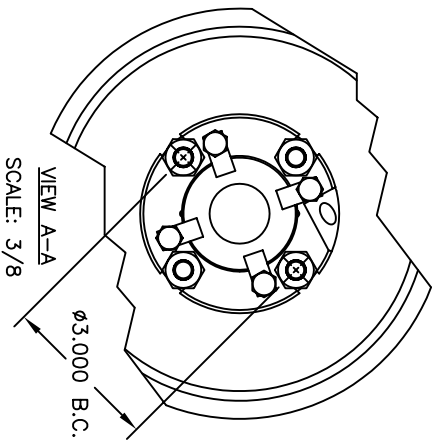
1/4 NPT  
TANGENTIAL SEAL FLUSH

A  
I

SEAL SIZE -- 1 1/8      TYPE -- ZN

BILL OF MATERIAL						
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN1125R1	1
A	2	DOWEL PIN 1/8 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	HEX BOLT 3/8-16 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 3/8-16 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-216	1
H	1	ROTARY MOUNT O-RING	---	VITON	-131	1
I	1	WAVE SPRING	---	17-7 PH	WS1125ZA/N	1
J	1	STATIONARY O-RING	---	VITON	-129	1
K	1	1-5/BX2-3/8 GLAND GASKET	---	TEFLON	GTZN1125GLD	1
L	1	ZN R1 GLAND	---	316L	ZN1125GR1	3
M	1	STATIONARY	---	SIC/CBN	ZA1125BR2	5
N	1	ROTARY INSERT	---	SIC	ZA1125AR4	6
O	1	ROTARY COLLAR	---	316L	ZA1125AIR4	4

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O  
REPAIR KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N



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DATE: 8/20/03		DRAWN BY: RE		DWG #: ZN1125R1		SHEET #: 1 OF 7		APPROVED: RE		Date: 4/5/04	
TITLE: ZN CARTRIDGE SEAL ASSEMBLY		GLAND STYLE: FLUSH		REV: ---		---		---		---	

STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	2-7/8"	3"

REV	DESCRIPTION	BY	DATE

SEAL SIZE - 1 1/4

TYPE - ZN

**BILL OF MATERIAL**

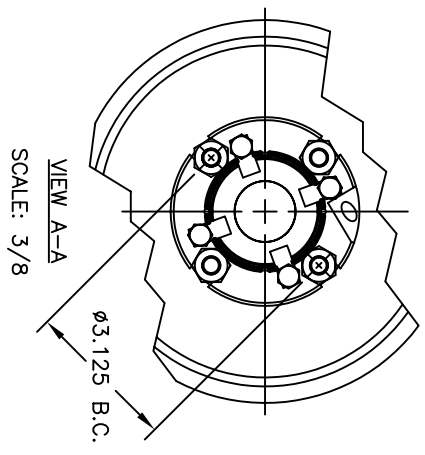
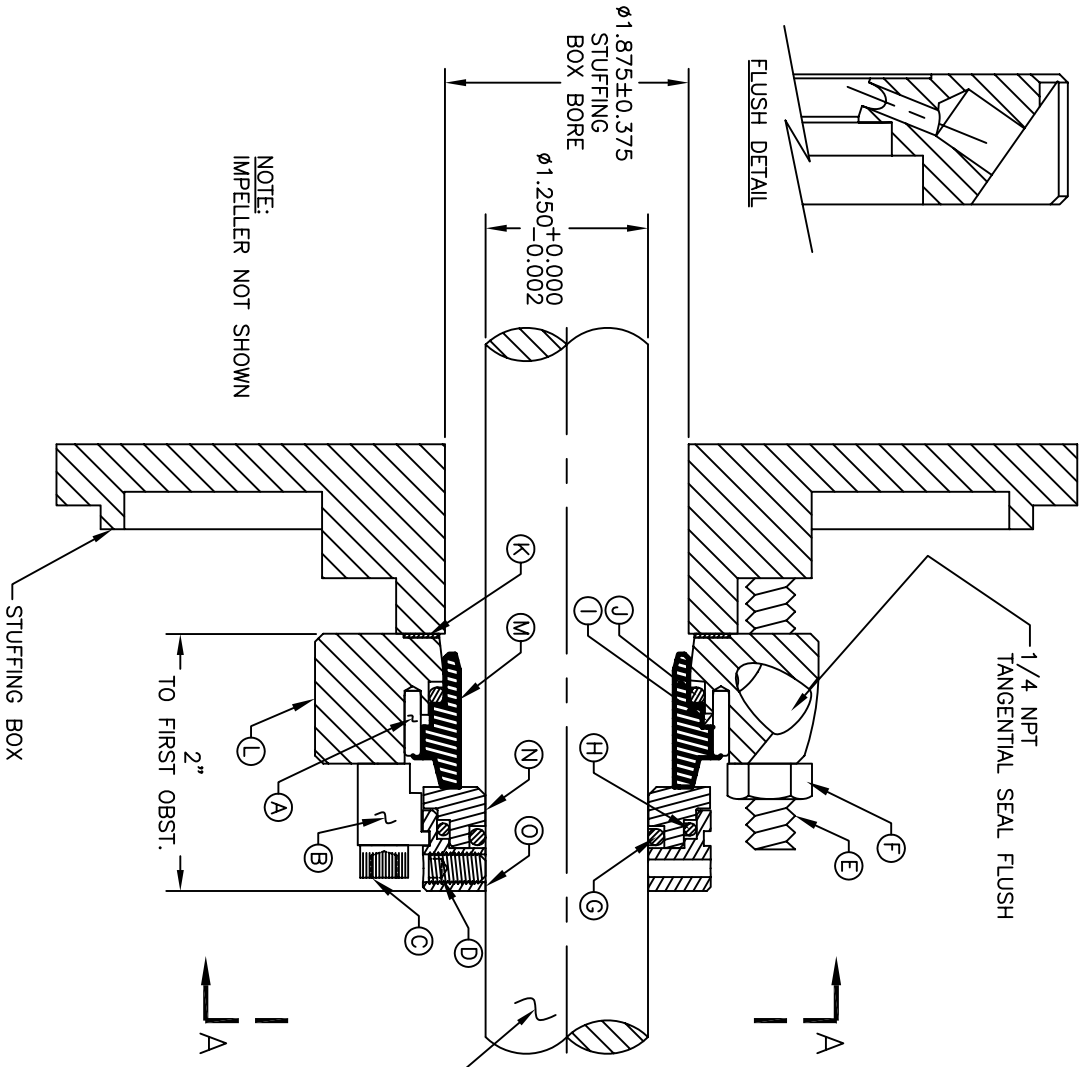
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	--	---	ZN1250R1	1
A	2	DOWEL PIN 1/8 X 1/2	1/2	---	---	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	HEX BOLT 3/8-16 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 3/8-16 UNC	--	316 S.S.	---	1
G	1	SHAFT O-RING	--	VITON	-218	1
H	1	ROTARY MOUNT O-RING	--	VITON	-133	1
I	1	WAVE SPRING	--	17-7 PH	WS1250ZA/N	1
J	1	STATIONARY O-RING	--	VITON	-225	1
K	1	2X2-1/2 GLAND GASKET	--	TEFLON	GTZN1250GLD	1
L	1	ZN R1 GLAND	--	316L	ZN1250GR1	3
M	1	STATIONARY	--	SIC/CBN	ZA1250BR2	5
N	1	ROTARY INSERT	--	SIC	ZA1250AR4	6
O	1	ROTARY COLLAR	--	316L	ZA1250A1R4	4

SEAL SIZE - 1 1/4 TYPE - ZN

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	--	--	ZN1250R1	1
A	2	DOWEL PIN 1/8 X 1/2	1/2	--	--	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	--	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	--	1
E	4	HEX BOLT 3/8-16 UNC	3"	316 S.S.	--	1
F	4	HEX NUT 3/8-16 UNC	--	316 S.S.	--	1
G	1	SHAFT O-RING	--	VITON	-218	1
H	1	ROTOR MOUNT O-RING	--	VITON	-133	1
I	1	WAVE SPRING	--	17-7 PH	WS1250ZA/N	1
J	1	STATIONARY O-RING	--	VITON	-225	1
K	1	2X2-1/2 GLAND GASKET	--	TEFLON	GTZN1250GLD	1
L	1	ZN R1 GLAND	--	316L	ZN1250GR1	3
M	1	STATIONARY	--	SIC/CBN	ZA1250BR2	5
N	1	ROTORARY INSERT	--	SIC	ZA1250AR4	6
O	1	ROTORARY COLLAR	--	316L	ZA1250A1R4	4

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O  
 REPAIR KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N



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TITLE: ZN CARTRIDGE SEAL ASSEMBLY		REV	
DATE: 8/13/04		SHEET #: 1 OF 7	
GLAND STYLE: FLUSH	DRAWN BY: RE	DWG #: ZN1250R1	APPROVED: RE
			Date: 4/5/04

STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	3	3-1/8

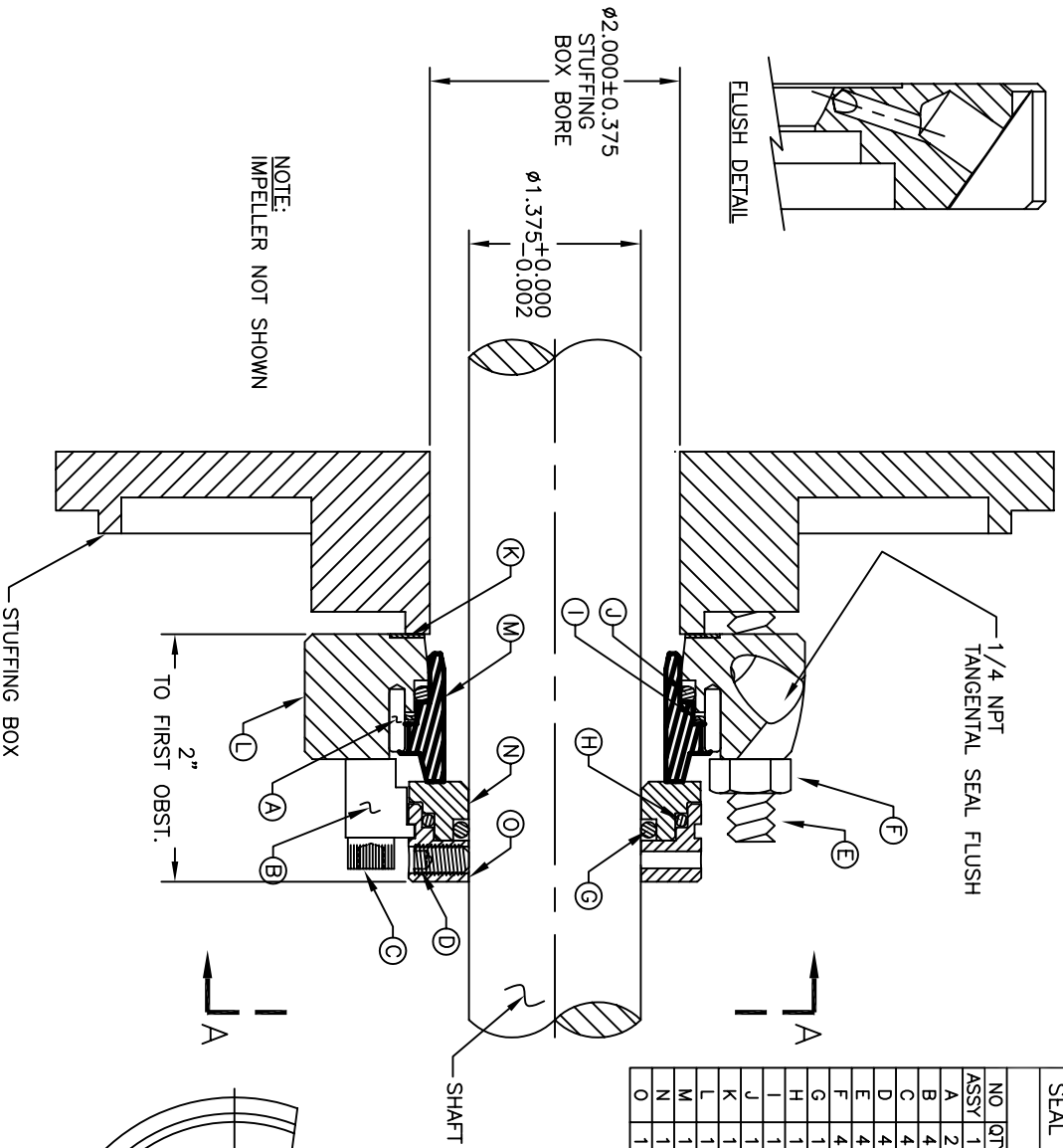
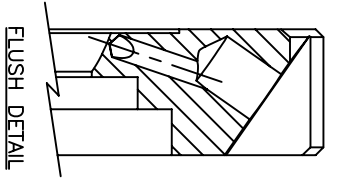
REV	DESCRIPTION	BY	DATE

SEAL SIZE - 1 3/8

TYPE - ZN

**BILL OF MATERIAL**

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	--	---	ZN1375R1	1
A	2	DOWEL PIN 1/8 X 1/2	1/2	---	---	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 3/8-16 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 3/8-16 UNC	--	316 S.S.	---	1
G	1	SHAFT O-RING	--	VITON	-220	1
H	1	ROTARY MOUNT O-RING	--	VITON	-135	1
I	1	WAVE SPRING	--	17-7 PH	WS150R2	1
J	1	STATIONARY O-RING	--	VITON	-226	1
K	1	2X2-5/8 GLAND GASKET	--	TEFLON	GTZN1375GLD	1
L	1	ZN R1 GLAND	--	316L	ZN1375GR1	3
M	1	STATIONARY	--	SIC/CBN	ZA1375BR2	5
N	1	ROTARY INSERT	--	SIC	ZA1375AR4	6
O	1	ROTARY COLLAR	--	316L	ZA1375A1R4	4

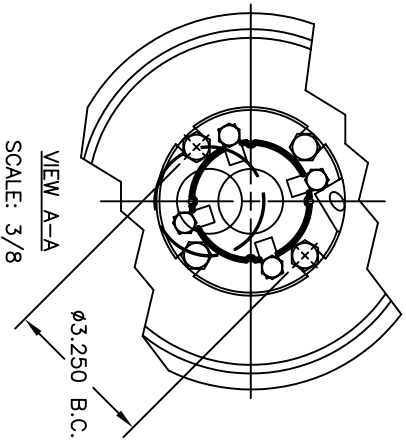


NOTE:  
IMPELLER NOT SHOWN

STUFFING BOX

SHAFT

2"  
TO FIRST OBST.



VIEW A-A  
SCALE: 3/8

SEAL SIZE -- 1 3/8

TYPE -- ZN

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSTY	1	ZN CARTRIDGE SEAL ASSEMBLY	--	--	ZN1375R1	1
A	2	DOWEL PIN 1/8 X 1/2	1/2	--	--	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	--	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	--	1
E	4	STUD 3/8-16 UNC	3"	316 S.S.	--	1
F	4	HEX NUT 3/8-16 UNC	--	316 S.S.	--	1
G	1	SHAFT O-RING	--	VITON	--220	1
H	1	ROTOR MOUNT O-RING	--	VITON	-135	1
I	1	WAVE SPRING	--	17-7 PH	WS150R2	1
J	1	STATIONARY O-RING	--	VITON	-226	1
K	1	2X2-5/8 GLAND GASKET	--	TEFLON	GTZN1375GLD	1
L	1	ZN R1 GLAND	--	316L	ZN1375GR1	3
M	1	STATIONARY	--	SIC/CBN	ZA1375BR2	5
N	1	ROTOR INSERT	--	SIC	ZA1375AR4	6
O	1	ROTOR COLLAR	--	316L	ZA1375AIR4	4

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O  
REPAIR KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N



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DATE: 8/12/03	GLAND STYLE: FLUSH	DRAWN BY: RE	DWG #: ZN1375R1	SHEET #: 1 OF 7	APPROVED: RE	Date: 8/29/03
TITLE: ZN CARTRIDGE SEAL ASSEMBLY				REV		

STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	3.125	3.250

REV	DESCRIPTION	BY	DATE

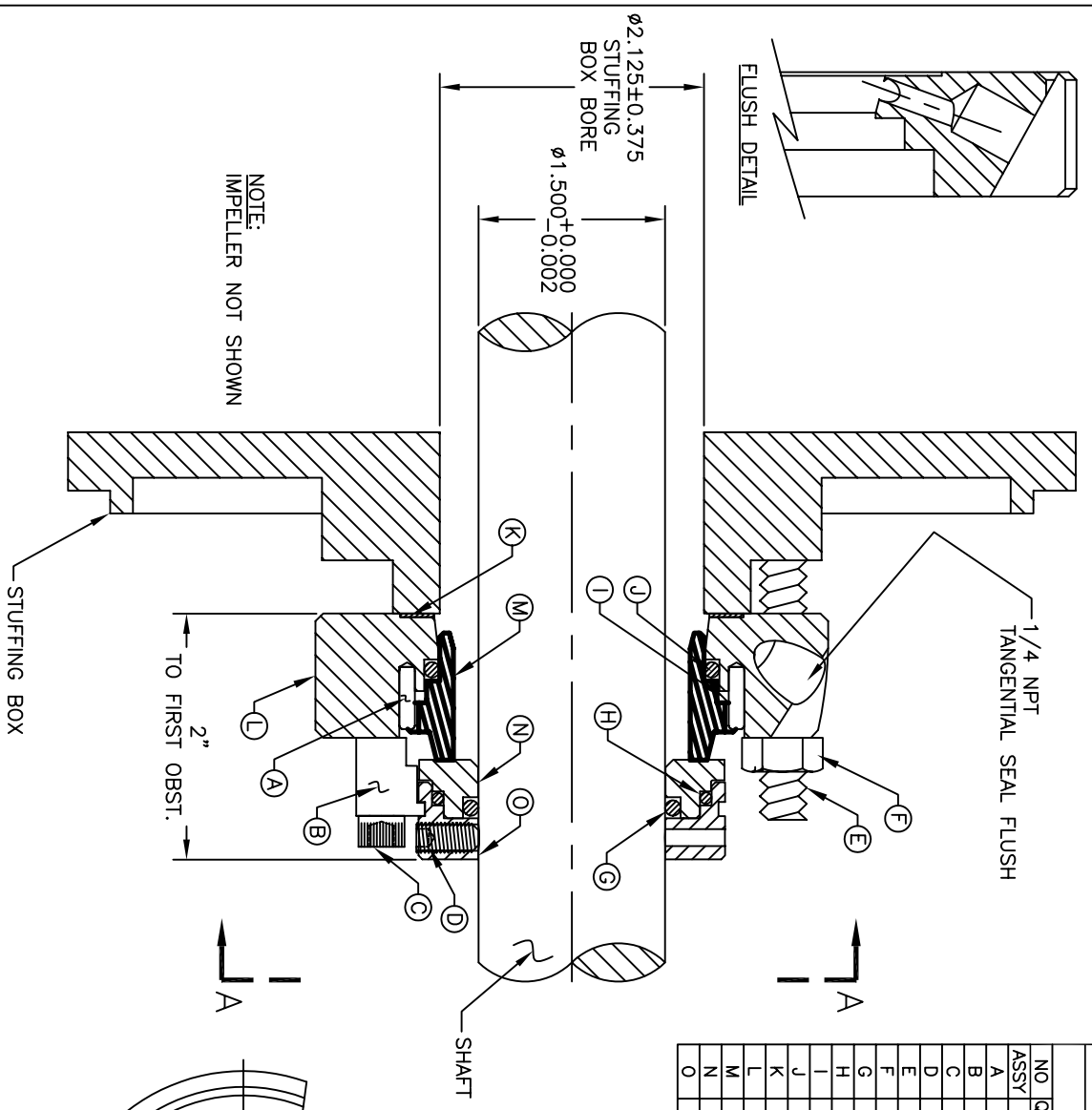
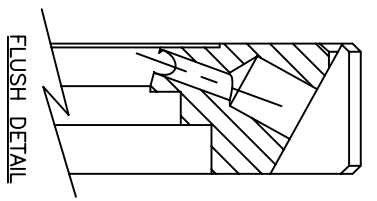
SEAL SIZE - 1 1/2

TYPE - ZN

**BILL OF MATERIAL**

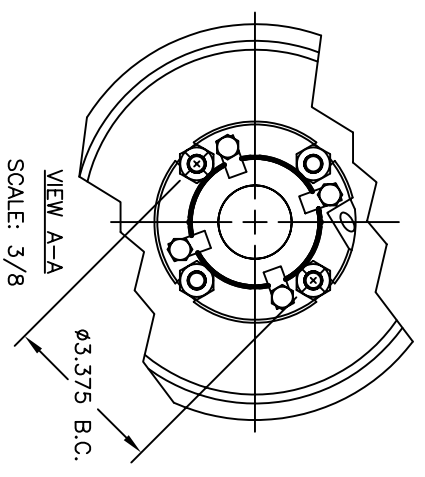
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	--	--	ZN1500R1	1
A	2	DOWEL PIN 1/8 X 1/2	1/2	--	--	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	--	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	--	1
E	4	HEX BOLT 3/8-16 UNC	3"	316 S.S.	--	1
F	4	HEX NUT 3/8-16 UNC	--	316 S.S.	--	1
G	1	SHAFT O-RING	--	VITON	-222	1
H	1	ROTARY MOUNT O-RING	--	VITON	-137	1
I	1	WAVE SPRING	--	17-7 PH	WS1500ZA/N	1
J	1	STATIONARY O-RING	--	VITON	-227	1
K	1	2-3/16X2-3/4 GLAND GASKET	--	TEFLON	GTZN1500GLD	1
L	1	ZN R1 GLAND	--	316L	ZN1500GR1	3
M	1	STATIONARY	--	SIC/CBN	ZA1500BR2	5
N	1	ROTARY INSERT	--	SIC	ZA1500AR4	6
O	1	ROTARY COLLAR	--	316L	ZA1500A1R4	4

SEAL SIZE - 1 1/2 TYPE - ZN



BILL OF MATERIAL						
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASST	1	ZN CARTRIDGE SEAL ASSEMBLY	--	--	ZN1500R1	1
A	2	DOWEL PIN 1/8 X 1/2	1/2	--	--	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	--	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	--	1
E	4	HEX BOLT 3/8-16 UNC	3"	316 S.S.	--	1
F	4	HEX NUT 3/8-16 UNC	--	316 S.S.	--	1
G	1	SHAFT O-RING	--	VITON	-222	1
H	1	ROTARY MOUNT O-RING	--	VITON	-137	1
I	1	WAVE SPRING	--	17-7 PH	WS1500ZA/N	1
J	1	STATIONARY O-RING	--	VITON	-227	1
K	1	2-3/16X2-3/4 GLAND GASKET	--	TEFLON	GZ1N1500GLD	1
L	1	ZN R1 GLAND	--	316L	ZN1500GR1	3
M	1	STATIONARY	--	SIC/CBN	ZA1500BR2	5
N	1	ROTARY INSERT	--	SIC	ZA1500AR4	6
O	1	ROTARY COLLAR	--	316L	ZA1500A1R4	4

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O  
 REPAIR KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N



**ZM TECHNOLOGIES**  
 2250 STEWART ST. UNIT #6  
 STOCKTON CA, 95205  
 PHONE (209) 547-1965  
 FAX (209) 464-8140

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TITLE: ZN CARTRIDGE SEAL ASSEMBLY		REV	
ZN 1-1/2"		-	
DATE: 8/19/03	FLUSH	DRAWN BY: RE	DWG #: ZN1500R1
SHEET #: 1 OF 7	APPROVED: RE	DATE: 4/5/04	

STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	3-1/4	3-3/8

REV	DESCRIPTION	BY	DATE

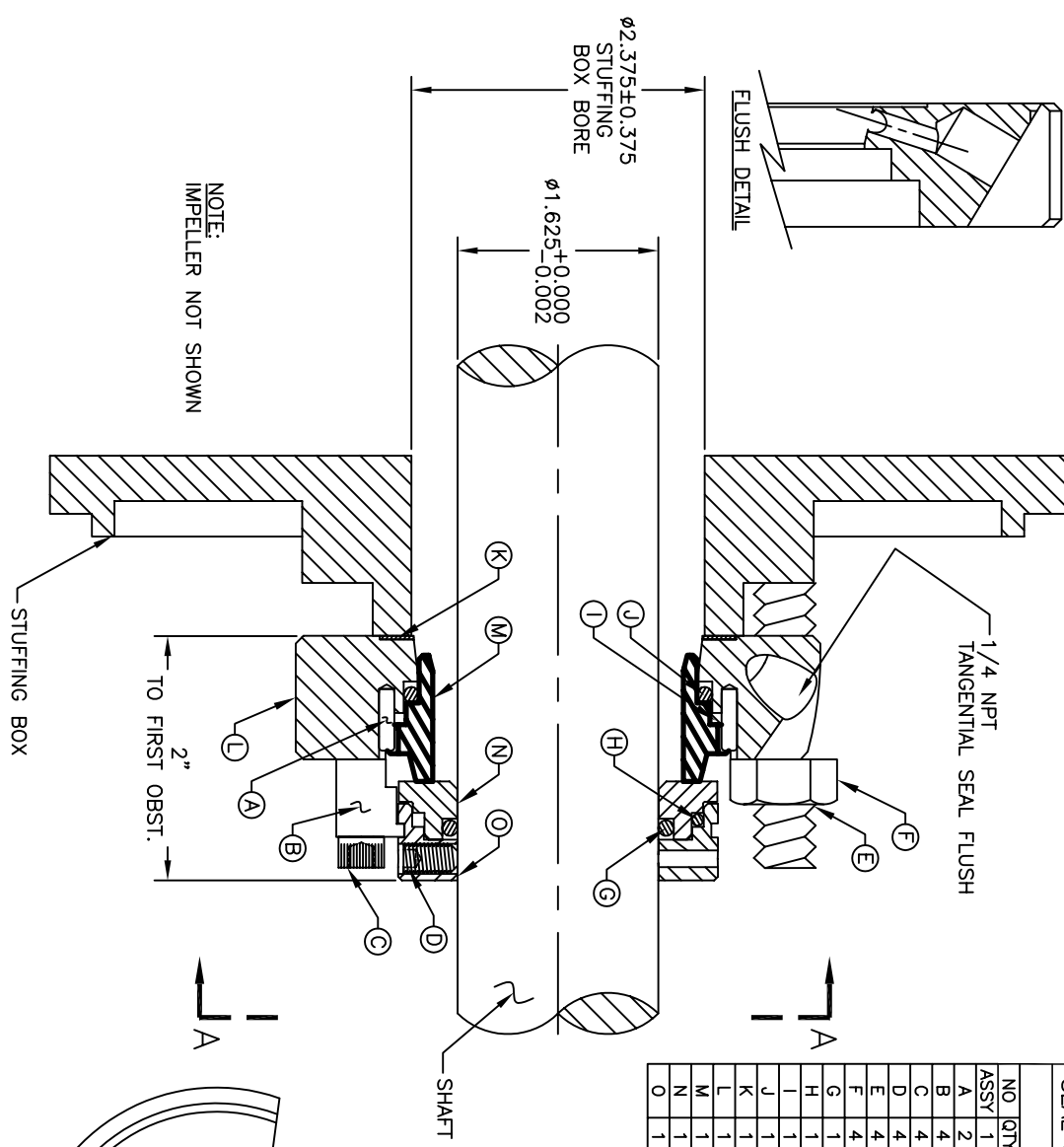
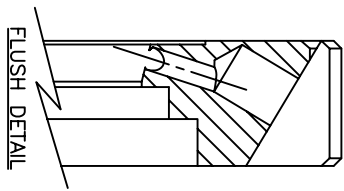


SEAL SIZE - 1 5/8

TYPE - ZN

**BILL OF MATERIAL**

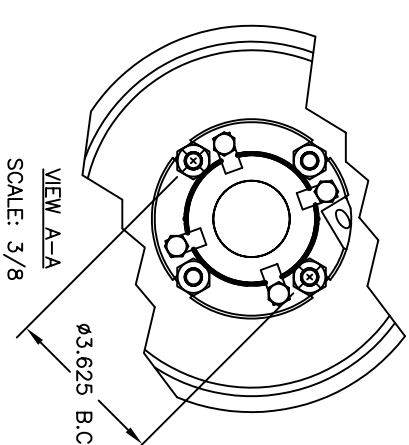
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	--	---	ZN1625R1	1
A	2	DOWEL PIN 1/8 X 1/2	1/2	---	---	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	7/16	316 S.S.	---	1
E	4	STUD 3/8-16 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 3/8-16 UNC	--	316 S.S.	---	1
G	1	SHAFT O-RING	--	VITON	-223	1
H	1	ROTARY MOUNT O-RING	--	VITON	-139	1
I	1	WAVE SPRING	--	17-7 PH	WS1625ZA/N	1
J	1	STATIONARY O-RING	--	VITON	-228	1
K	1	2-1/4x2-7/8x1/16 GASKET	--	TEFLON	GT1625ZNGLD	1
L	1	ZN R1 GLAND	--	316L	ZN1625G1	3
M	1	STATIONARY	--	SIC	ZA1625BR2	5
N	1	ROTARY INSERT	--	SIC	ZA1625AR4	6
O	1	ROTARY COLLAR	--	316L	ZA1625A1R4	4



NOTE:  
IMPELLER NOT SHOWN

STUFFING BOX

SHAFT



STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	3-1/2	3-5/8

SEAL SIZE - 1 5/8

TYPE - ZN

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN1625R1	1
A	2	DOWEL PIN 1/8 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETScrew 1/4-28 UNF	7/16	316 S.S.	---	1
E	4	STUD 3/8-16 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 3/8-16 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VTN	-223	1
H	1	ROtARY MOUNT O-RING	---	VTN	-139	1
I	1	WAVE SPRING	---	17-7 PH	WS1625ZA/N	1
J	1	StATIONARY O-RING	---	VTN	-228	1
K	1	2-1/4x2-7/8x1/16 GASKET	---	TEFLON	GT1625ZNGLD	1
L	1	ZN R1 GLAND	---	316L	ZN1625G1	3
M	1	StATIONARY	---	SIC	ZA1625BR2	5
N	1	ROtARY INSERT	---	SIC	ZA1625AR4	6
O	1	ROtARY COLLAR	---	316L	ZA1625A1R4	4

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O  
REPAIR KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N



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TITLE: ZN CARTRIDGE SEAL ASSEMBLY	REV	---
DATE: 8/20/03	GLAND STYLE: FLUSH	DRAWN BY: RE
		DWG #: ZN1625R1
		SHEET #: 1 OF 7
		APPROVED: RE
		Date: 4/5/04

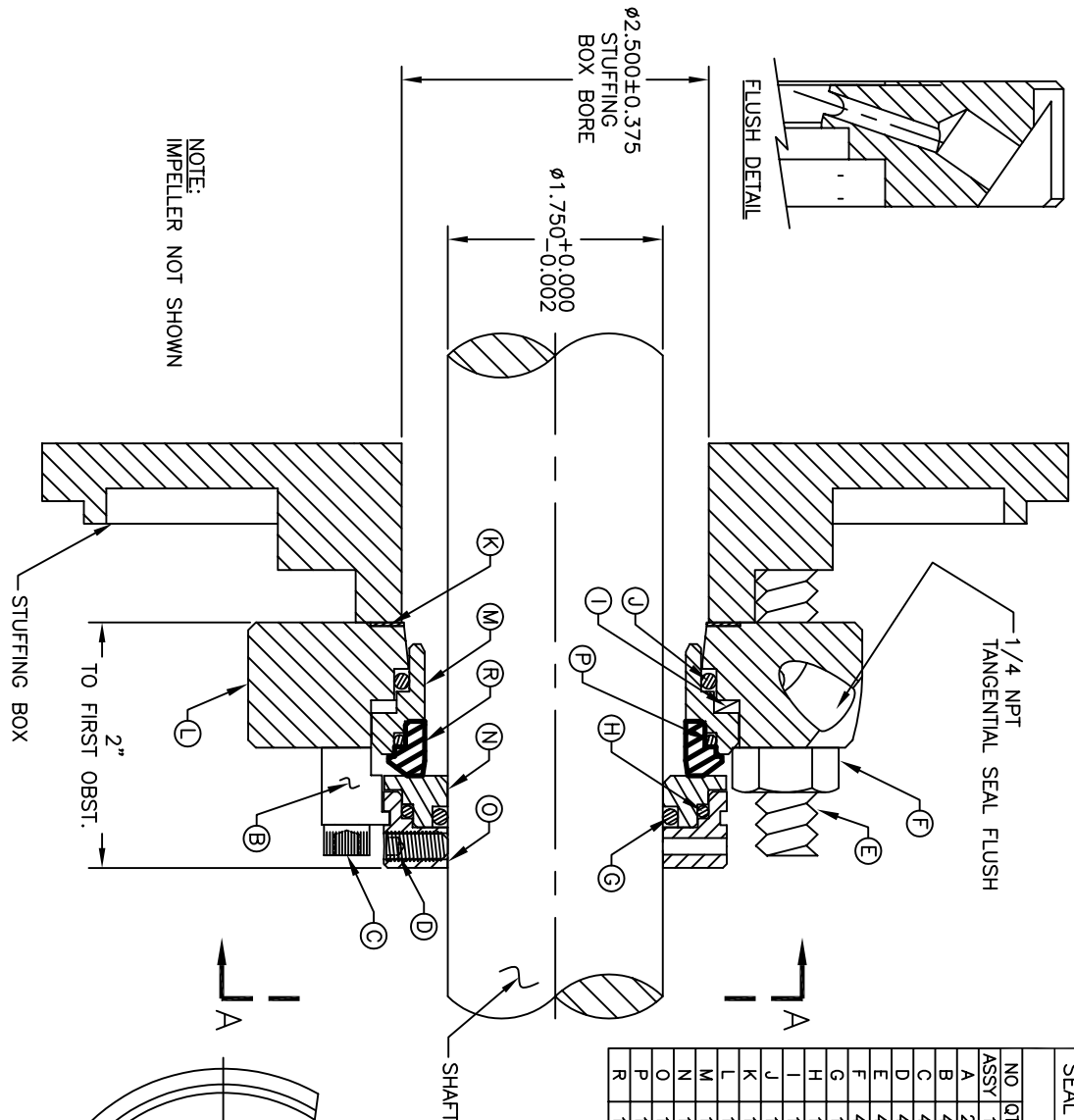
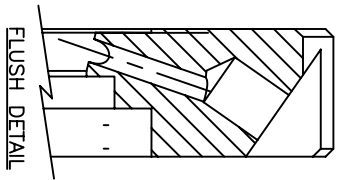
REV	DESCRIPTION	BY	DATE
-----	-------------	----	------

SEAL SIZE -- 1 3/4

TYPE -- ZN

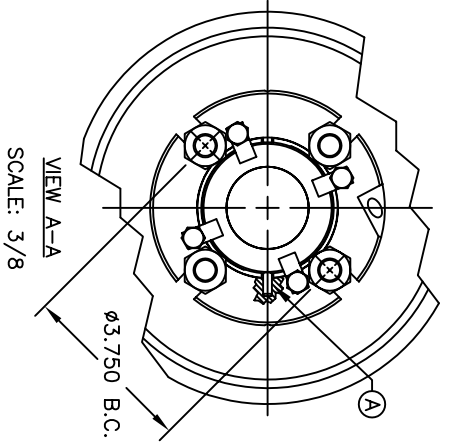
**BILL OF MATERIAL**

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	--	--	ZN1750R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	--	--	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	--	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	--	1
E	4	STUD 1/2-13 UNC	3"	316 S.S.	--	1
F	4	HEX NUT 1/2-13 UNC	--	316 S.S.	--	1
G	1	SHAFT O-RING	--	VITON	-224	1
H	1	ROTARY MOUNT O-RING	--	VITON	-141	1
I	1	WAVE SPRING	--	17-7 PH	WS1750ZA/N	1
J	1	STATIONARY RETAINER O-RING	--	VITON	-229	1
K	1	2-3/8X3 GLAND GASKET	--	TEFLON	GTZN1750GLD	1
L	1	ZN R1 GLAND	--	316L	ZN1750GR1	3
M	1	STATIONARY RETAINER	--	316L	ZA1750B1R4	5
N	1	ROTARY INSERT	--	SIC	ZA1750AR4	6
O	1	ROTARY COLLAR	--	316L	ZA1750A1R4	4
P	1	STATIONARY MOUNT O-RING	--	VITON	-143	1
R	1	STATIONARY INSERT	--	SIC	ZA1750BR4	7



NOTE:  
IMPELLER NOT SHOWN

STUFFING BOX  
TO FIRST OBST. 2"



VIEW A-A  
SCALE: 3/8

SEAL SIZE - 1 3/4		TYPE - ZN				
BILL OF MATERIAL						
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSTY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN1750R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETScrew 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 1/2-13 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 1/2-13 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-224	1
H	1	ROTAry MOUNT O-RING	---	VITON	-141	1
I	1	WAVE SPRING	---	17-7 PH	WS1750ZA/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-229	1
K	1	2-3/8X3 GLAND GASKET	---	TEFLON	GTZN1750GLD	1
L	1	ZN R1 GLAND	---	316L	ZN1750GR1	3
M	1	STATIONARY RETAINER	---	316L	ZA1750BTR4	5
N	1	ROTAry INSERT	---	SIC	ZA1750AR4	6
O	1	ROTAry COLLAR	---	316L	ZA1750A1R4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-143	1
R	1	STATIONARY INSERT	---	SIC	ZA1750BR4	7

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O, P, R  
REPAIR KIT CONSISTS OF: B, C, D, G, H, I, J, K, N, P, R



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TITLE: ZN CARTRIDGE SEAL ASSEMBLY

DATE: 8/20/03

GLAND STYLE	DRAWN BY:	DWG #:	SHEET #:	APPROVED:	Date:
FLUSH	RE	ZN1750R1	1 OF 8	RE	4/5/04

STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	3-5/8	3-3/4

REV	DESCRIPTION	BY	DATE
-----	-------------	----	------

SEAL SIZE -- 1 7/8

TYPE -- ZN

**BILL OF MATERIAL**

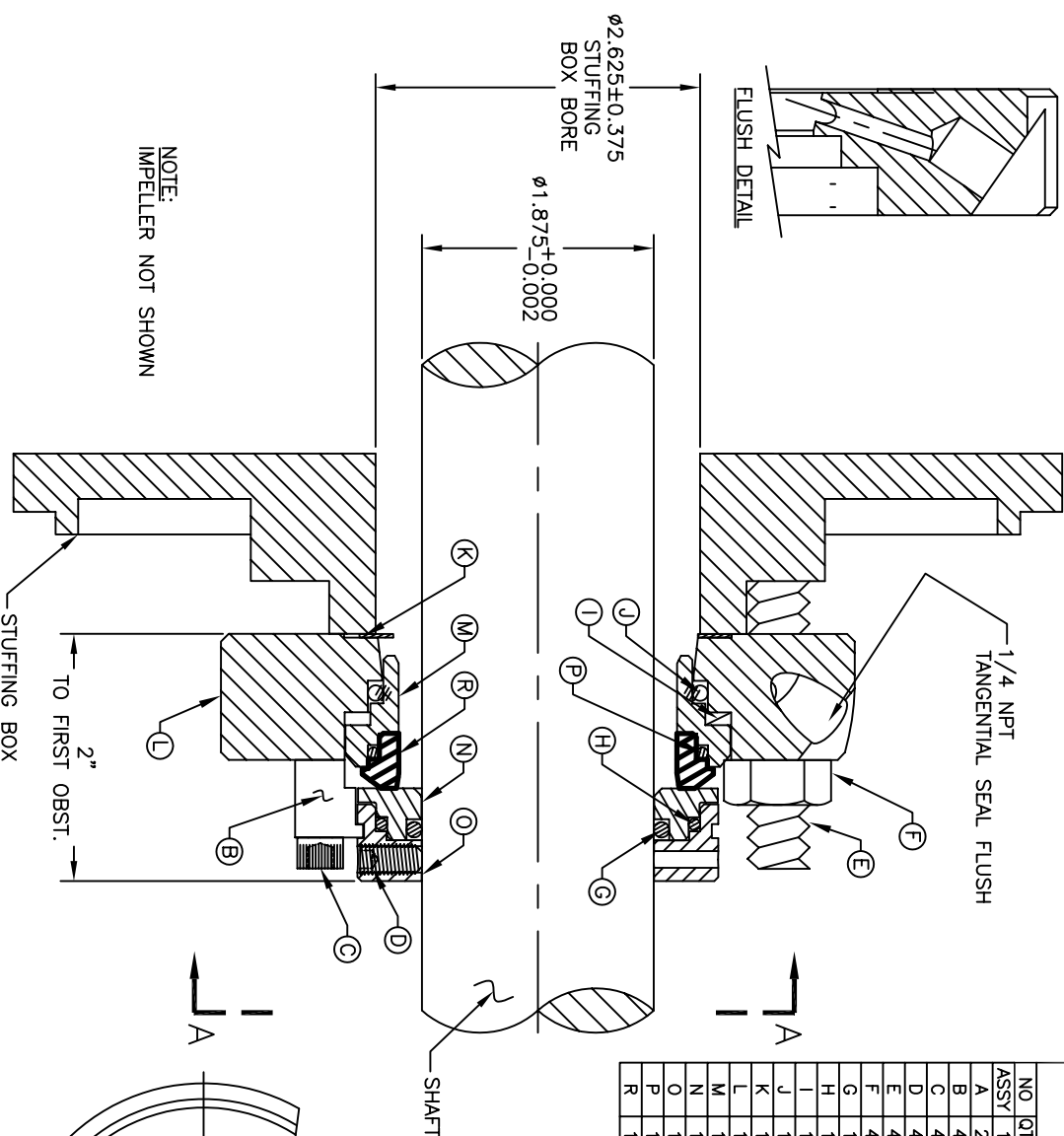
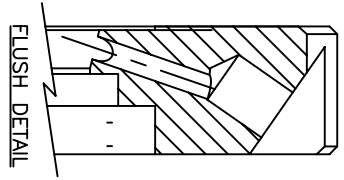
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	--	--	ZN1875R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	--	--	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	--	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	--	1
E	4	STUD 1/2-13 UNC	3"	316 S.S.	--	1
F	4	HEX NUT 1/2-13 UNC	--	316 S.S.	--	1
G	1	SHAFT O-RING	--	VITON	-225	1
H	1	ROTARY MOUNT O-RING	--	VITON	-143	1
I	1	WAVE SPRING	--	17-7 PH	WS1875ZA/N	1
J	1	STATIONARY RETAINER O-RING	--	VITON	-230	1
K	1	2-1/2X3-1/8 GLAND GASKET	--	TEFLON	GTZN1880GLD	1
L	1	ZN R1 GLAND	--	316L	ZN1875GR1	3
M	1	STATIONARY RETAINER	--	316L	ZA1875B1R4	5
N	1	ROTARY INSERT	--	SIC	ZA1875AR4	6
O	1	ROTARY COLLAR	--	316L	ZA1875A1R4	4
P	1	STATIONARY MOUNT O-RING	--	VITON	-145	1
R	1	STATIONARY INSERT	--	SIC	ZA1875BR4	7

SEAL SIZE - 1 7/8 TYPE - ZN

BILL OF MATERIAL

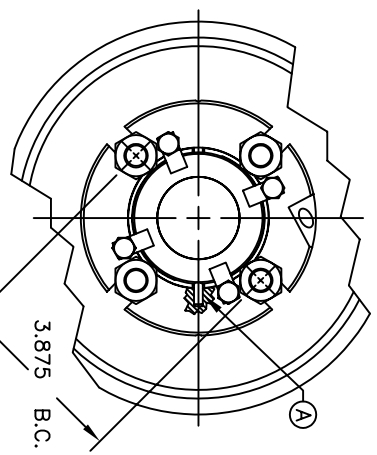
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN1875R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETScrew 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 1/2-13 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 1/2-13 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-225	1
H	1	ROtARY MOUNT O-RING	---	VITON	-143	1
I	1	WAVE SPRING	---	17-7 PH	WS1875ZA/N	1
J	1	StATIONARY RETAINER O-RING	---	VITON	-230	1
K	1	2-1/2X3-1/8 GLAND GASKET	---	TEFLON	GTZN1880GLD	1
L	1	ZN R1 GLAND	---	316L	ZN1875GR1	3
M	1	StATIONARY RETAINER	---	316L	ZA1875BR4	5
N	1	ROtARY INSERT	---	SIC	ZA1875AR4	6
O	1	ROtARY COLLAR	---	316L	ZA1875AIR4	4
P	1	StATIONARY MOUNT O-RING	---	VITON	-145	1
R	1	StATIONARY INSERT	---	SIC	ZA1875BR4	7

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O, P, R  
 REPAIR KIT CONSISTS OF: B, C, D, G, H, I, J, K, N, P, R



NOTE:  
 IMPELLER NOT SHOWN

2"  
 TO FIRST OBST.



SCALE: 3/8



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DATE: 4/7/04		DRAWN BY: RE		DWG #: ZN1875R1		SHEET #: 1 OF 8		APPROVED: RE		Date: 4/7/04	
TITLE: ZN CARTRIDGE SEAL ASSEMBLY		REV		REV		REV		REV		REV	

STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	3-3/4	3-7/8

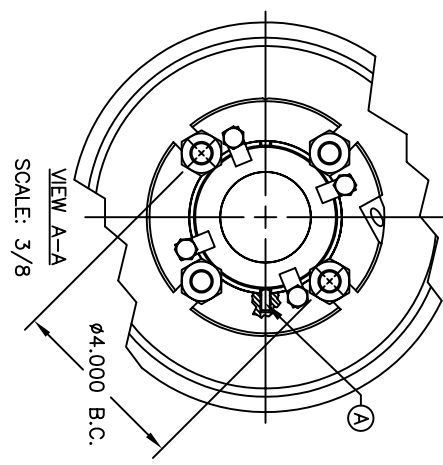
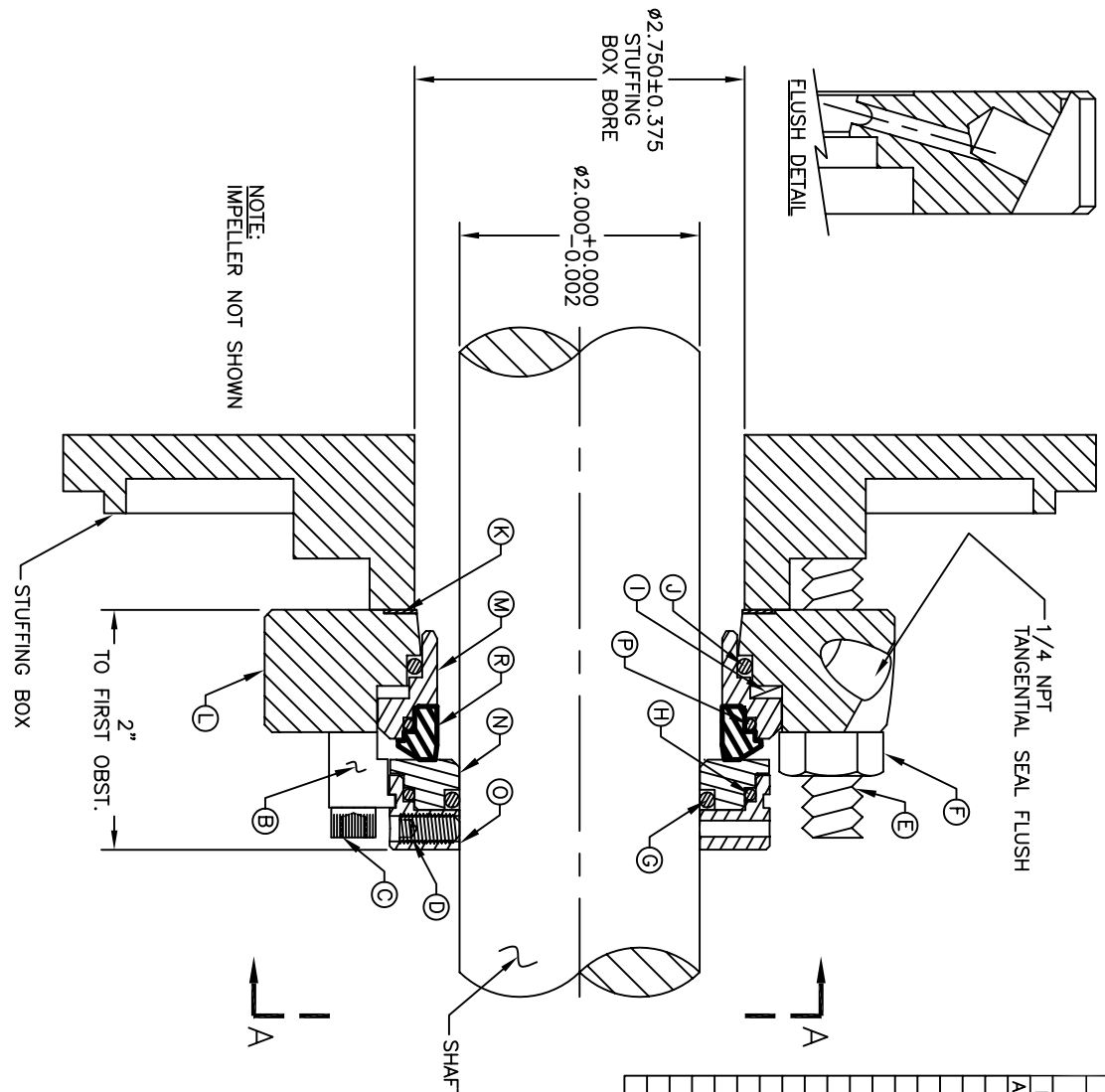
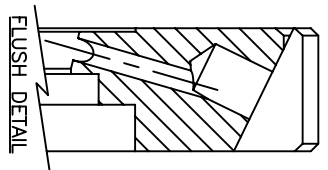
REV	DESCRIPTION	BY	DATE
-----	-------------	----	------

SEAL SIZE -- 2"

TYPE -- ZN

**BILL OF MATERIAL**

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	--	--	ZN2000R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	--	--	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	--	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	--	1
E	4	HEX BOLT 1/2-13 UNC	3"	316 S.S.	--	1
F	4	HEX NUT 1/2-13 UNC	--	316 S.S.	--	1
G	1	SHAFT O-RING	--	VITON	-226	1
H	1	ROTARY MOUNT O-RING	--	VITON	-148	1
I	1	WAVE SPRING	--	17-7 PH	WS2000ZA/N	1
J	1	STATIONARY RETAINER O-RING	--	VITON	-231	1
K	1	2-5/8x3-1/4 GLAND GASKET	--	TEFLON	GTZN2000GLD	1
L	1	ZN R1 GLAND	--	316L	ZN2000GR1	3
M	1	STATIONARY RETAINER	--	316L	ZA2000B1R4	5
N	1	ROTARY INSERT	--	SIC	ZA2000AR4	6
O	1	ROTARY COLLAR	--	316L	ZA2000A1R4	4
P	1	STATIONARY MOUNT O-RING	--	VITON	-148	1
R	1	STATIONARY INSERT	--	SIC	ZA2000BR4	7



NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	--	--	ZN2000R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	--	--	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	--	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	--	1
E	4	HEX BOLT 1/2-13 UNC	3"	316 S.S.	--	1
F	4	HEX NUT 1/2-13 UNC	--	316 S.S.	--	1
G	1	SHAFT O-RING	--	VITON	-226	1
H	1	ROTAARY MOUNT O-RING	--	VITON	-148	1
I	1	WAVE SPRING	--	17-7 PH	WS2000ZA/N	1
J	1	STATIONARY RETAINER O-RING	--	VITON	-231	1
K	1	2-5/8x3-1/4 GLAND GASKET	--	TEFLON	GTZN2000GLD	1
L	1	ZN R1 GLAND	--	316L	ZN2000GR1	3
M	1	STATIONARY RETAINER	--	316L	ZA2000B1R4	5
N	1	ROTAARY INSERT	--	SIC	ZA2000AR4	6
O	1	ROTAARY COLLAR	--	316L	ZA2000A1R4	4
P	1	STATIONARY MOUNT O-RING	--	VITON	-148	1
R	1	STATIONARY INSERT	--	SIC	ZA2000BR4	7

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O, P, R  
 REPAIR KIT CONSISTS OF: B, C, D, G, H, I, J, K, N, P, R

**ZM TECHNOLOGIES**  
 2250 STEWART ST. UNIT #6  
 STOCKTON CA. 95205  
 PHONE (209) 547-1965  
 FAX (209) 464-8140

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DATE: 9/7/03		DRAWN BY: RE		DWG #: ZN2000R1		SHEET #: 1 OF 8		APPROVED: RE		Date: 10/3/03	
TITLE: ZN CARTRIDGE SEAL ASSEMBLY		GLAND STYLE: FLUSH		REV		REV		REV		REV	

STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	3.875	4.000

REV	DESCRIPTION	BY	DATE



SEAL SIZE -- 2-1/8"

TYPE -- ZN

**BILL OF MATERIAL**

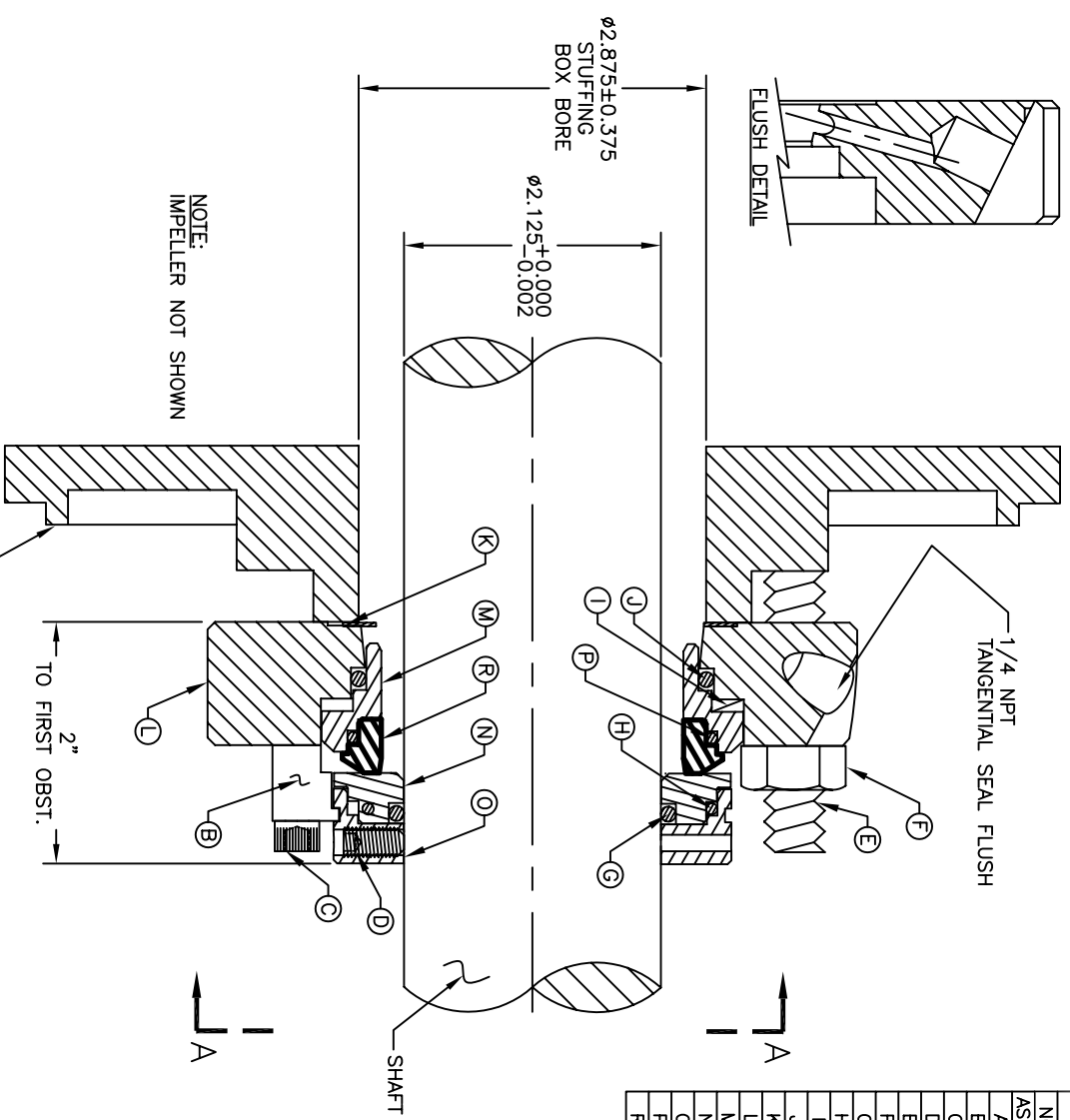
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	--	--	ZN2125R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	--	--	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	--	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	--	1
E	4	HEX BOLT 1/2-13 UNC	3"	316 S.S.	--	1
F	4	HEX NUT 1/2-13 UNC	--	316 S.S.	--	1
G	1	SHAFT O-RING	--	VITON	-227	1
H	1	ROTARY MOUNT O-RING	--	VITON	-150	1
I	1	WAVE SPRING	--	17-7 PH	WS2125ZA/N	1
J	1	STATIONARY RETAINER O-RING	--	VITON	-232	1
K	1	2-3/4x3-3/8 GLAND GASKET	--	TEFLON	GTZN2125GLD	1
L	1	ZN R1 GLAND	--	316L	ZN2125GR1	3
M	1	STATIONARY RETAINER	--	316L	ZA2125B1R4	5
N	1	ROTARY INSERT	--	SIC	ZA2125AR4	6
O	1	ROTARY COLLAR	--	316L	ZA2125A1R4	4
P	1	STATIONARY MOUNT O-RING	--	VITON	-150	1
R	1	STATIONARY INSERT	--	SIC	ZA2125BR4	7

SEAL SIZE - 2-1/8" TYPE - ZN

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASST	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN2125R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	HEX BOLT 1/2-13 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 1/2-13 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-227	1
H	1	ROTARY MOUNT O-RING	---	VITON	-150	1
I	1	WAVE SPRING	---	17-7 PH	WS2125ZA/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-232	1
K	1	2-3/4x3-3/8 GLAND GASKET	---	TEFLON	GTZN2125GLD	1
L	1	ZN R1 GLAND	---	316L	ZN2125GR1	3
M	1	STATIONARY RETAINER	---	316L	ZA2125B1R4	5
N	1	ROTARY INSERT	---	SIC	ZA2125AR4	6
O	1	ROTARY COLLAR	---	316L	ZA2125A1R4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-150	1
R	1	STATIONARY INSERT	---	SIC	ZA2125BR4	7

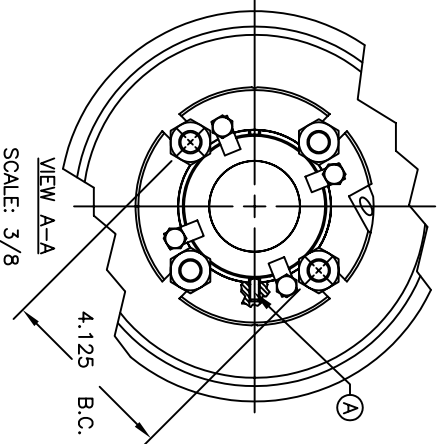
SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O, P, R  
 REPAIR KIT CONSISTS OF: B, C, D, G, H, I, J, K, N, P, R



NOTE:  
 IMPELLER NOT SHOWN



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STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	4.000	4.125

TITLE: ZN CARTRIDGE SEAL ASSEMBLY	REV	---	APPROVED: RE	Date: 4/10/04
DATE: 4/10/04	GLAND STYLE: FLUSH	DRAWN BY: RE	DWG #: ZN2125R1	SHEET #: 1 OF 8

REV	DESCRIPTION	BY	DATE

SEAL SIZE -- 2-1/4"

TYPE -- ZN

**BILL OF MATERIAL**

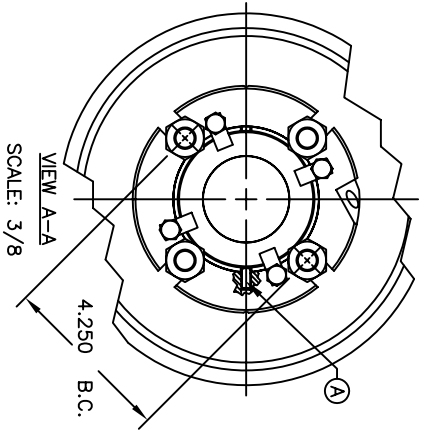
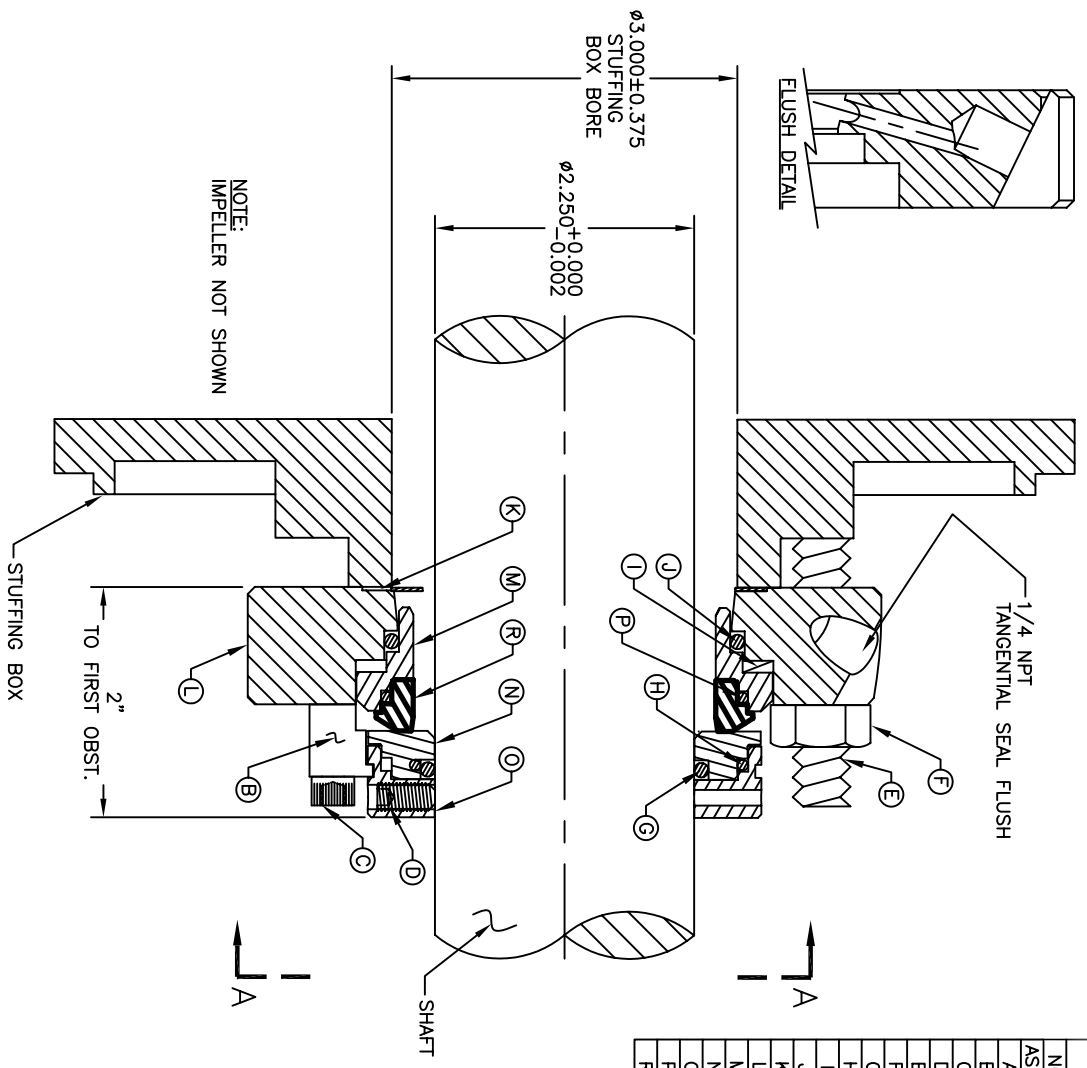
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	--	--	ZN2250R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	--	--	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	--	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	--	1
E	4	HEX BOLT 1/2-13 UNC	3"	316 S.S.	--	1
F	4	HEX NUT 1/2-13 UNC	--	316 S.S.	--	1
G	1	SHAFT O-RING	--	VITON	-228	1
H	1	ROTARY MOUNT O-RING	--	VITON	-151	1
I	1	WAVE SPRING	--	17-7 PH	WS2250ZA/N	1
J	1	STATIONARY RETAINER O-RING	--	VITON	-233	1
K	1	2-7/8x3-1/2 GLAND GASKET	--	TEFLON	GTZN2250GLD	1
L	1	ZN R1 GLAND	--	316L	ZN2250GR1	3
M	1	STATIONARY RETAINER	--	316L	ZA2250B1R4	5
N	1	ROTARY INSERT	--	SIC	ZA2250AR4	6
O	1	ROTARY COLLAR	--	316L	ZA2250A1R4	4
P	1	STATIONARY MOUNT O-RING	--	VITON	-151	1
R	1	STATIONARY INSERT	--	SIC	ZA2250BR4	7

SEAL SIZE - 2-1/4" TYPE - ZN

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASST	1	ZN CARTRIDGE SEAL ASSEMBLY	--	--	ZN2250R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	--	--	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	--	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	--	1
E	4	HEX BOLT 1/2-13 UNC	3"	316 S.S.	--	1
F	4	HEX NUT 1/2-13 UNC	--	316 S.S.	--	1
G	1	SHAFT O-RING	--	VITON	--228	1
H	1	ROTIARY MOUNT O-RING	--	VITON	-151	1
I	1	WAVE SPRING	--	17-7 PH	WS2250ZA/N	1
J	1	STATIONARY RETAINER O-RING	--	VITON	-233	1
K	1	2-7/8x3-1/2 GLAND GASKET	--	TEFLON	GTZN2250GLD	1
L	1	ZN R1 GLAND	--	316L	ZN2250GR1	3
M	1	STATIONARY RETAINER	--	316L	ZA2250BR1R4	5
N	1	ROTIARY INSERT	--	SIC	ZA2250AR4	6
O	1	ROTIARY COLLAR	--	316L	ZA2250A1R4	4
P	1	STATIONARY MOUNT O-RING	--	VITON	-151	1
R	1	STATIONARY INSERT	--	SIC	ZA2250BR4	7

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O, P, R  
 REPAIR KIT CONSISTS OF: B, C, D, G, H, I, J, K, N, P, R



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TITLE: ZN CARTRIDGE SEAL ASSEMBLY		REV	APPROVED: RE		Date: 5/27/04
DATE: 5/27/04	GLAND STYLE: FLUSH	DRAWN BY: RE	DWG #: ZN2250R1	SHEET #: 1 OF 8	

STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	4.125	4.250

REV	DESCRIPTION	BY	DATE

SEAL SIZE -- 2-3/8"

TYPE -- ZN

**BILL OF MATERIAL**

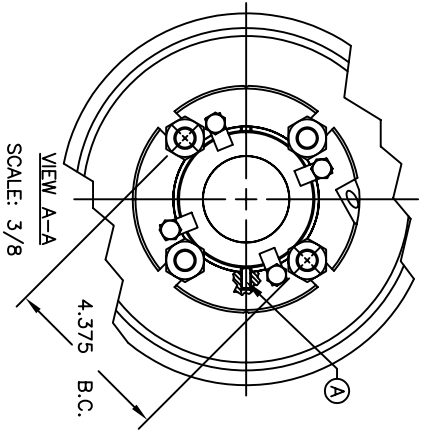
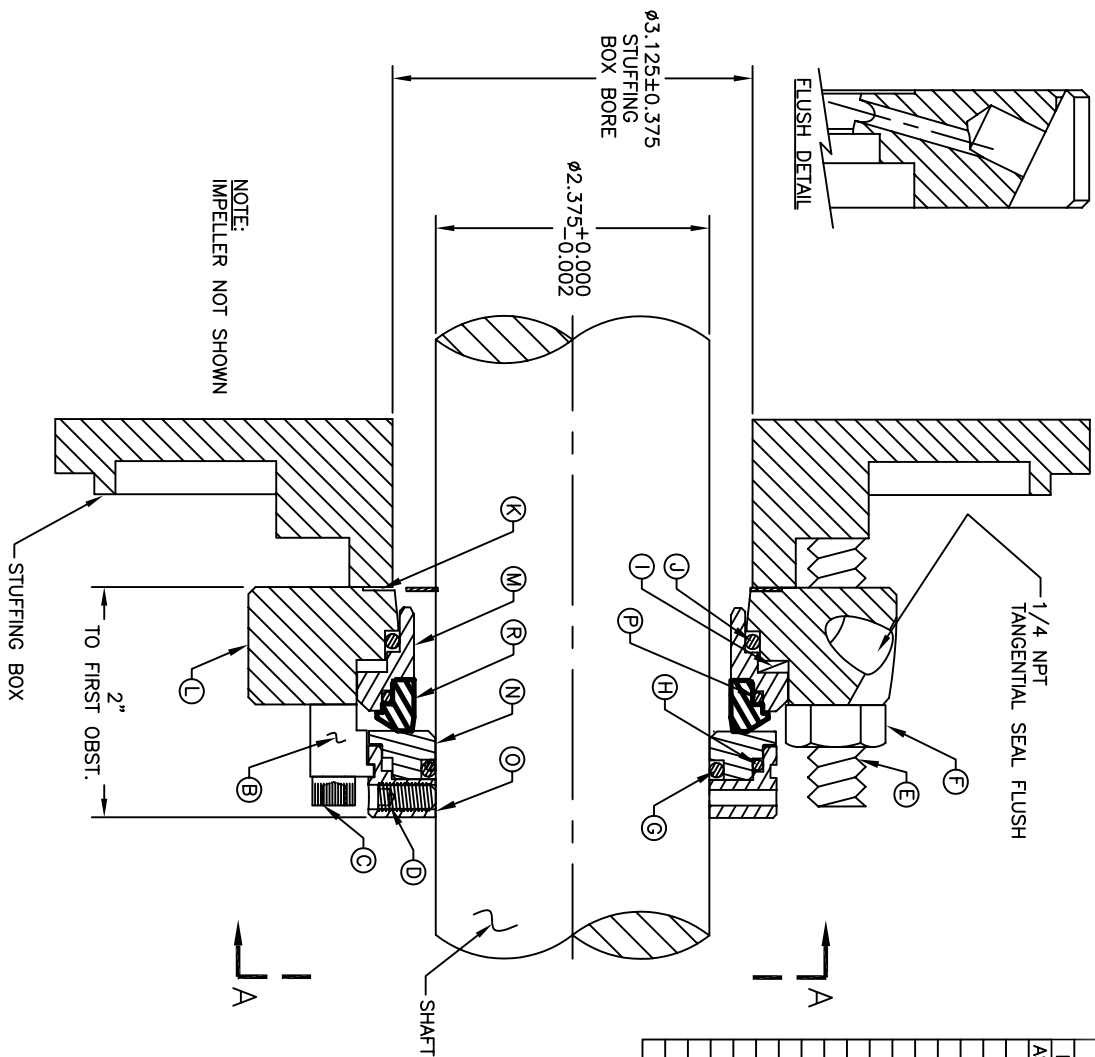
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	--	--	ZN2375R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	--	--	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	--	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	--	1
E	4	HEX BOLT 1/2-13 UNC	3"	316 S.S.	--	1
F	4	HEX NUT 1/2-13 UNC	--	316 S.S.	--	1
G	1	SHAFT O-RING	--	VITON	-229	1
H	1	ROTARY MOUNT O-RING	--	VITON	2.5mmX79V	1
I	1	WAVE SPRING	--	17-7 PH	WS2375ZA/N	1
J	1	STATIONARY RETAINER O-RING	--	VITON	-234	1
K	1	3x3-5/8 GLAND GASKET	--	TEFLON	GTZN2375GLD	1
L	1	ZN R1 GLAND	--	316L	ZN2375GR1	3
M	1	STATIONARY RETAINER	--	316L	ZA2375B1R4	5
N	1	ROTARY INSERT	--	SIC	ZA2375AR4	6
O	1	ROTARY COLLAR	--	316L	ZA2375A1R4	4
P	1	STATIONARY MOUNT O-RING	--	VITON	2.5mmX79V	1
R	1	STATIONARY INSERT	--	SIC	ZA2375BR4	7

SEAL SIZE - 2-3/8" TYPE - ZN

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASST	1	ZN CARTRIDGE SEAL ASSEMBLY	--	--	ZN2375R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	--	--	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	--	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	--	1
E	4	HEX BOLT 1/2-13 UNC	3"	316 S.S.	--	1
F	4	HEX NUT 1/2-13 UNC	--	316 S.S.	--	1
G	1	SHAFT O-RING	--	VITON	--229	1
H	1	ROTARY MOUNT O-RING	--	VITON	2.5mmX79V	1
I	1	WAVE SPRING	--	17-7 PH	WS2375ZA/N	1
J	1	STATIONARY RETAINER O-RING	--	VITON	--234	1
K	1	3x3-5/8 GLAND GASKET	--	TEFLON	G17N2375GLD	1
L	1	ZN R1 GLAND	--	316L	ZN2375GR1	3
M	1	STATIONARY RETAINER	--	316L	ZA2375BR1R4	5
N	1	ROTARY INSERT	--	SIC	ZA2375AR4	6
O	1	ROTARY COLLAR	--	316L	ZA2375A1R4	4
P	1	STATIONARY MOUNT O-RING	--	VITON	2.5mmX79V	1
R	1	STATIONARY INSERT	--	SIC	ZA2375BR4	7

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O, P, R  
 REPAIR KIT CONSISTS OF: B, C, D, G, H, I, J, K, N, P, R



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STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	4.250	4.375

TITLE: ZN CARTRIDGE SEAL ASSEMBLY		REV	APPROVED: RE		Date: 8/15/04
DATE: 11/11/04	GLAND STYLE: FLUSH	DRAWN BY: RE	DWG #: ZN2375R1	SHEET #: 1 OF 8	

REV	DESCRIPTION	BY	DATE

SEAL SIZE -- 2 1/2

TYPE -- ZN

**BILL OF MATERIAL**

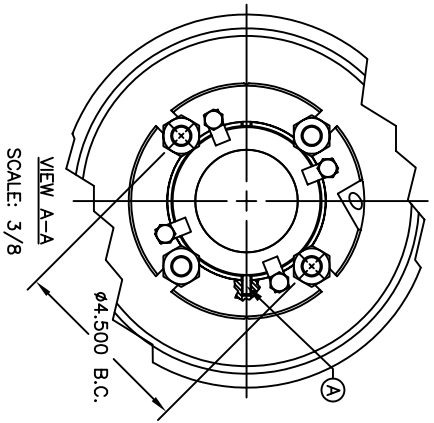
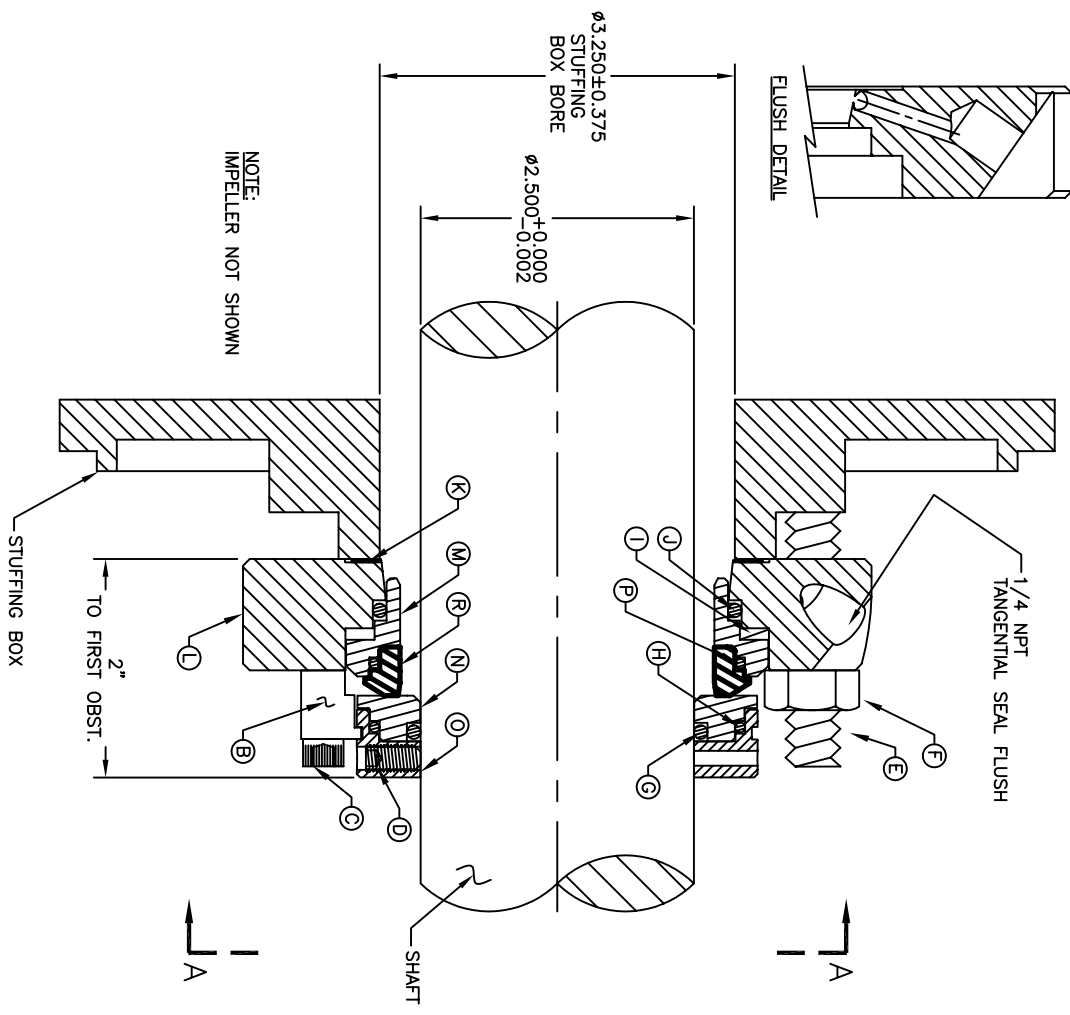
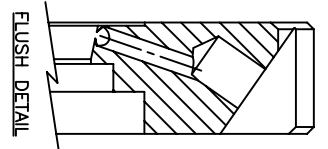
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	--	--	ZN2500R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	--	--	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	--	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	--	1
E	4	STUD 1/2-13 UNC	3"	316 S.S.	--	1
F	4	HEX NUT 1/2-13 UNC	--	316 S.S.	--	1
G	1	SHAFT O-RING	--	VITON	-230	1
H	1	ROTARY MOUNT O-RING	--	VITON	-152	1
I	1	WAVE SPRING	--	17-7 PH	WS2500ZA/N	1
J	1	STATIONARY RETAINER O-RING	--	VITON	-235	1
K	1	3-1/8X3-3/4 GLAND GASKET	--	TEFLON	GTZN2500GLD	1
L	1	ZN R1 GLAND	--	316L	ZN2500GR1	3
M	1	STATIONARY RETAINER	--	316L	ZA2500B1R4	5
N	1	ROTARY INSERT	--	SIC	ZA2500AR4	6
O	1	ROTARY COLLAR	--	316L	ZA2500A1R4	4
P	1	STATIONARY MOUNT O-RING	--	VITON	-152	1
R	1	STATIONARY INSERT	--	SIC	ZA2500BR4	7

SEAL SIZE - 2 1/2 TYPE - ZN

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASST	1	ZN CARTRIDGE SEAL ASSEMBLY	--	--	ZN2500R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	--	--	1
B	4	ZN CLIP	--	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	--	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	--	1
E	4	STUD 1/2-13 UNC	3"	316 S.S.	--	1
F	4	HEX NUT 1/2-13 UNC	--	316 S.S.	--	1
G	1	SHAFT O-RING	--	VITON	-230	1
H	1	ROTARY MOUNT O-RING	--	VITON	-152	1
I	1	WAVE SPRING	--	17-7 PH	WS2500ZA/N	1
J	1	STATIONARY RETAINER O-RING	--	VITON	-235	1
K	1	3-1/8X3-3/4 GLAND GASKET	--	TEFLON	G1ZN2500GLD	1
L	1	ZN R1 GLAND	--	316L	ZN2500GR1	3
M	1	STATIONARY RETAINER	--	316L	ZA2500B1R4	5
N	1	ROTARY INSERT	--	SIC	ZA2500AR4	6
O	1	ROTARY COLLAR	--	316L	ZA2500A1R4	4
P	1	STATIONARY MOUNT O-RING	--	VITON	-152	1
R	1	STATIONARY INSERT	--	SIC	ZA2500BR4	7

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O, P, R  
 REPAIR KIT CONSISTS OF: B, C, D, G, H, I, J, K, N, P, R



STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	4-3/8	4-1/2



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TITLE: ZN CARTRIDGE SEAL ASSEMBLY		REV	
DATE: 8/24/03	FLUSH	DRAWN BY: RE	DWG #: ZN2500R1
SHEET #: 1 OF 8		APPROVED: RE	
Date: 1/5/04		Date:	

REV	DESCRIPTION	BY	DATE



SEAL SIZE -- 2-3/4

TYPE -- ZN

## BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN2750R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-232	1
H	1	ROTARY MOUNT O-RING	---	VITON	-152	1
I	1	WAVE SPRING	---	17-7 PH	WS2750ZA/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-237	1
K	1	3-1/2X4-1/8 GLAND GASKET	---	TEFLON	GTZN2750GLD	1
L	1	ZN R1 GLAND	---	316L	ZN2750GR1	3
M	1	STATIONARY RETAINER	---	316L	ZA2750B1R4	5
N	1	ROTARY INSERT	---	SIC	ZA2750AR4	6
O	1	ROTARY COLLAR	---	316L	ZA2750A1R4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-152	1
R	1	STATIONARY INSERT	---	SIC	ZA2750BR4	7

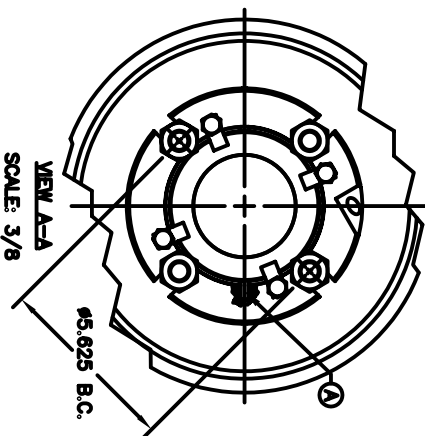
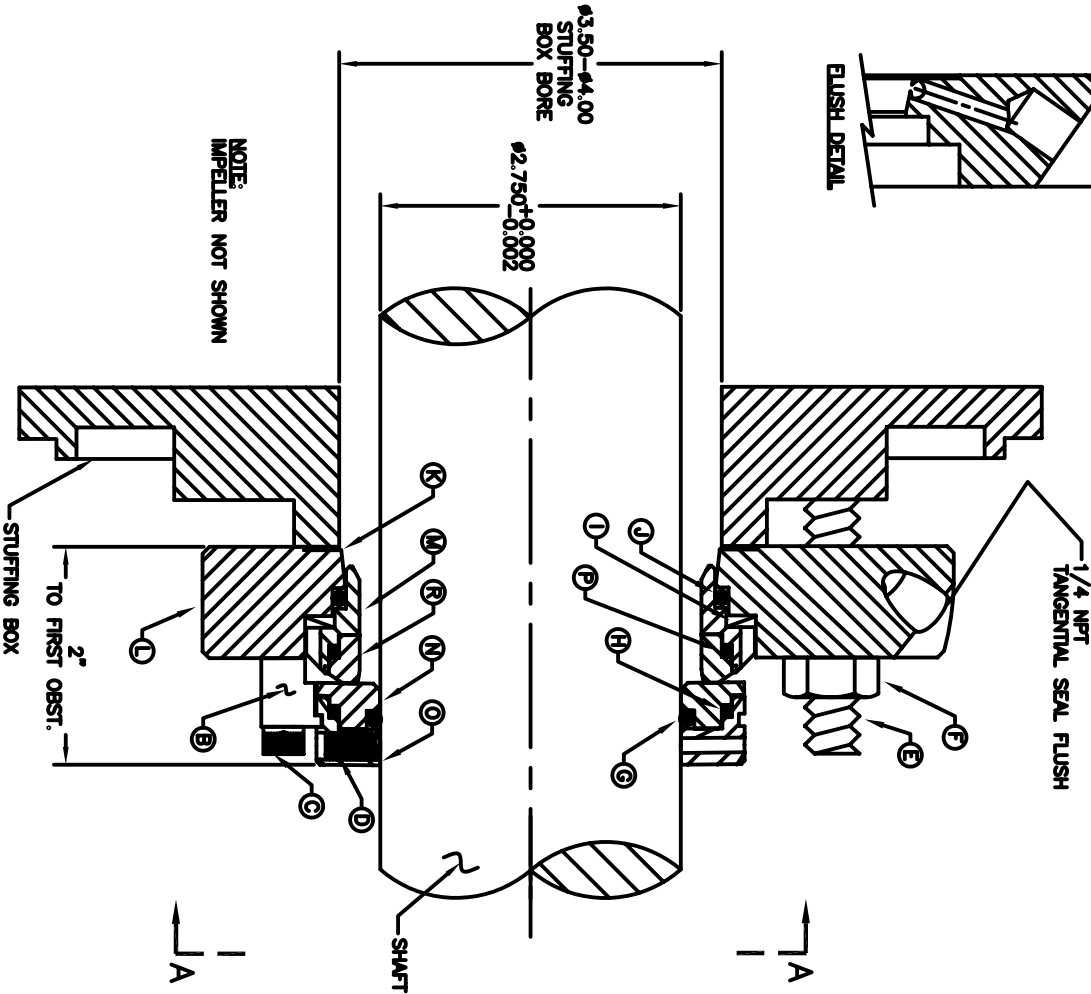
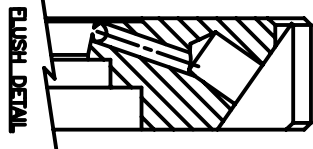
SEAL SIZE - 2-3/4

TYPE - ZN

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSTY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN2750R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-232	1
H	1	ROTOR MOUNT O-RING	---	VITON	-152	1
I	1	WAVE SPRING	---	---	---	1
J	1	STATIONARY RETAINER O-RING	---	17-7 PH	WS2750Z/N	1
K	1	3-1/2X4-1/8 GLAND GASKET	---	TEFLON	-237	1
L	1	ZN R1 GLAND	---	316L	G1ZN2750GLD	3
M	1	STATIONARY RETAINER	---	316L	ZN2750GR1	5
N	1	ROTORARY INSERT	---	SIC	ZA2750BTR4	6
O	1	ROTORARY COLLAR	---	316L	ZA2750AR4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-152	1
R	1	STATIONARY INSERT	---	SIC	ZA2750BR4	7

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O, P, R  
 REPAIR KIT CONSISTS OF: B, C, D, G, H, L, J, K, M, N, P, R



STUD/BOLT SIZE	1/2	5/8
MIN. BOLT CIRCLE	5-1/2	5-5/8



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TITLE: ZN CARTRIDGE SEAL ASSEMBLY		REV	
DATE: 10/7/05	FLUSH	DRAWN BY: RE	DWG #: ZN2750R1
SHEET #: 1 OF 8		APPROVED: RE	
Date: 10/7/05			

REV	DESCRIPTION	BY	DATE

SEAL SIZE -- 3

TYPE -- ZN

## BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN3000R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-234	1
H	1	ROTARY MOUNT O-RING	---	VITON	-154	1
I	1	WAVE SPRING	---	17-7 PH	WS3000ZA/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-239	1
K	1	3-3/4X4-3/8 GLAND GASKET	---	TEFLON	GTZN3000GLD	1
L	1	ZN R1 GLAND	---	316L	ZN3000GR1	3
M	1	STATIONARY RETAINER	---	316L	ZA3000B1R4	5
N	1	ROTARY INSERT	---	SIC	ZA3000AR4	6
O	1	ROTARY COLLAR	---	316L	ZA3000A1R4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-154	1
R	1	STATIONARY INSERT	---	SIC	ZA3000BR4	7

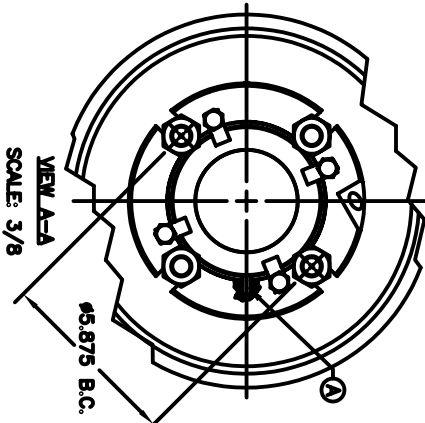
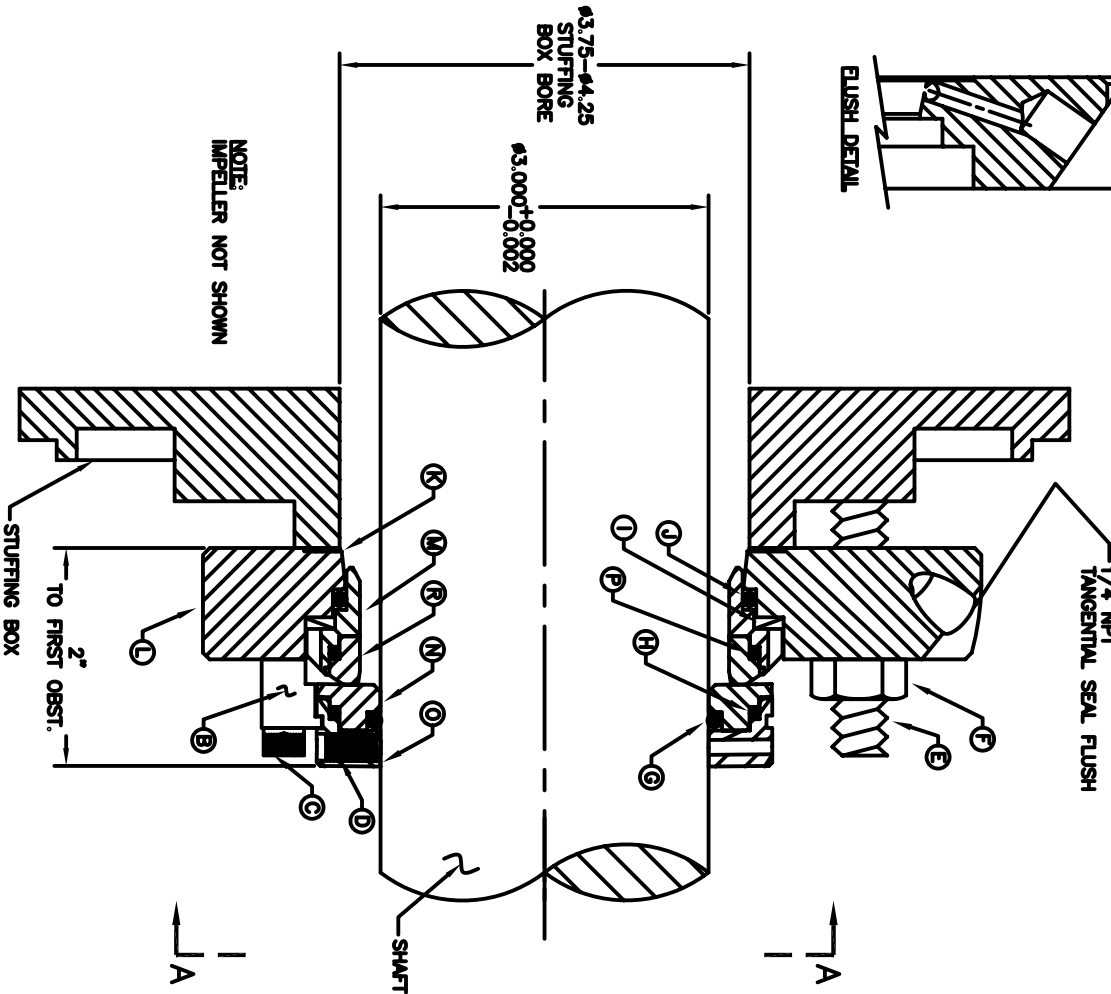
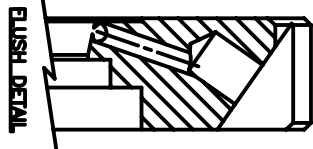
SEAL SIZE - 3

TYPE - ZN

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASST	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN3000R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-234	1
H	1	ROTOR MOUNT O-RING	---	VITON	-154	1
I	1	WAVE SPRING	---	17-7 PH	WS3000Z/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-239	1
K	1	3-3/4X4-3/8 GLAND GASKET	---	TEFLON	GZN3000GLD	1
L	1	ZN R1 GLAND	---	316L	ZN3000GR1	3
M	1	STATIONARY RETAINER	---	316L	ZAS3000R1R4	5
N	1	ROTOR INSERT	---	SIC	ZAS3000AR4	6
O	1	ROTOR COLLAR	---	316L	ZAS3000AR4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-154	1
R	1	STATIONARY INSERT	---	SIC	ZAS3000BR4	7

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O, P, R  
 REPAIR KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, P, R



STUD/BOLT SIZE	1/2	5/8
MIN. BOLT CIRCLE	5-3/4	5-7/8



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DATE: 11/7/04	GLAND STYLE: FLUSH	DRAWN BY: RE	DWG #: ZN3000R1	SHEET #: 1 OF 8	APPROVED: RE	Date: 10/7/05
TITLE: ZN CARTRIDGE SEAL ASSEMBLY			REV: ZN 3 <sup>rd</sup>			

REV	DESCRIPTION	BY	DATE

SEAL SIZE -- 3-1/2

TYPE -- ZN

## BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN3500R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-238	1
H	1	ROTARY MOUNT O-RING	---	VITON	-156	1
I	1	WAVE SPRING	---	17-7 PH	WS3500ZA/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-241	1
K	1	4-1/4X4-7/8 GLAND GASKET	---	TEFLON	GTZN3500GLD	1
L	1	ZN R1 GLAND	---	316L	ZN3500GR1	3
M	1	STATIONARY RETAINER	---	316L	ZA3500B1R4	5
N	1	ROTARY INSERT	---	SIC	ZA3500AR4	6
O	1	ROTARY COLLAR	---	316L	ZA3500A1R4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-156	1
R	1	STATIONARY INSERT	---	SIC	ZA3500BR4	7

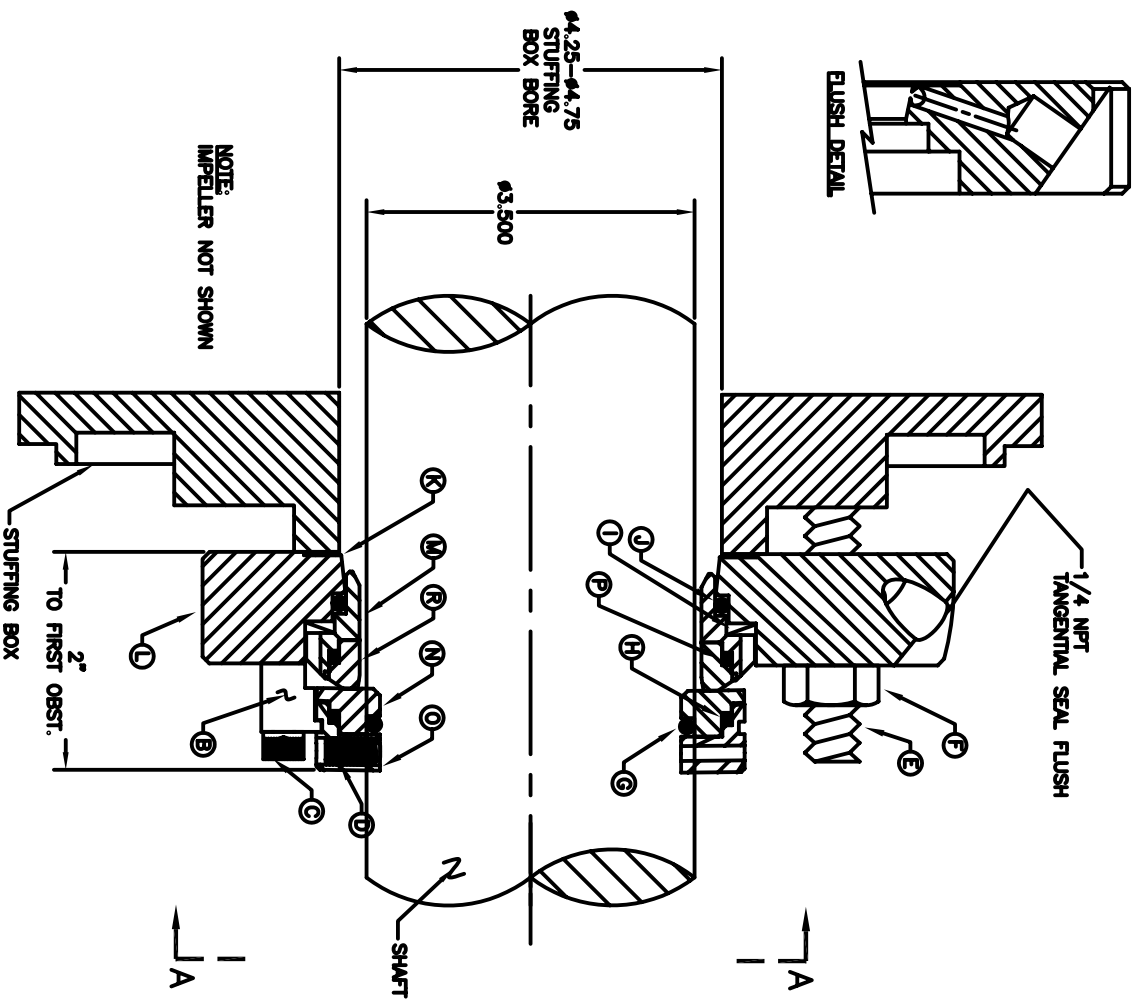
SEAL SIZE - 3-1/2

TYPE - ZN

BILL OF MATERIAL

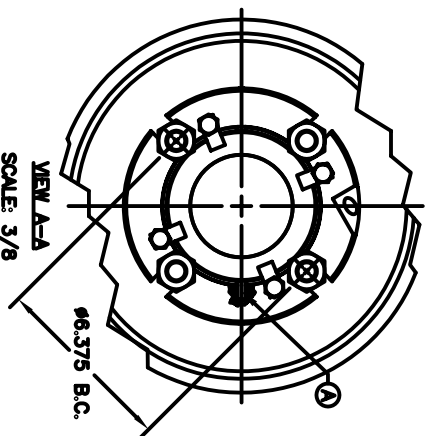
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSTY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN3500R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-238	1
H	1	ROTOR MOUNT O-RING	---	VITON	-158	1
I	1	WAVE SPRING	---	17-7 PH	WS3500Z/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-241	1
K	1	4-1/4X-7/8 GLAND GASKET	---	TEFLON	GZNS500GLD	1
L	1	ZN R1 GLAND	---	316L	ZN3500GR1	3
M	1	STATIONARY RETAINER	---	316L	ZAS500BTR4	5
N	1	ROTORARY INSERT	---	SIC	ZAS500AR4	6
O	1	ROTORARY COLLAR	---	316L	ZAS500ATR4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-158	1
R	1	STATIONARY INSERT	---	SIC	ZAS500BR4	7

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O, P, R  
 REPAIR KIT CONSISTS OF: B, C, D, G, H, L, J, K, M, N, P, R



NOTE:  
IMPPELLER NOT SHOWN

2"  
TO FIRST OBST.  
STUFFING BOX



VIEW A-A  
SCALE: 3/8

SHAFT  
A



ZM TECHNOLOGIES  
 2230 STEWART ST. UNIT #6  
 STOCKTON CA. 95205  
 PHONE (209) 547-1965  
 FAX (209) 464-8140

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TITLE: ZN CARTRIDGE SEAL ASSEMBLY

REV

DATE: 10/10/05

FLUSH

DRAWN BY: RE

DWG #: ZN3500R1

SHEET #: 1 OF 8

APPROVED: RE

Date: 10/10/05

REV

DESCRIPTION

BY

DATE

STUD/BOLT SIZE	1/2	5/8
MIN. BOLT CIRCLE	6-1/4	6-3/8

SEAL SIZE -- 3-3/4

TYPE -- ZN

## BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN3750R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-240	1
H	1	ROTARY MOUNT O-RING	---	VITON	-157	1
I	1	WAVE SPRING	---	17-7 PH	WS3750ZA/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-243	1
K	1	4-1/2X5-1/8 GLAND GASKET	---	TEFLON	GTZN3750GLD	1
L	1	ZN R1 GLAND	---	316L	ZN3750GR1	3
M	1	STATIONARY RETAINER	---	316L	ZA3750B1R4	5
N	1	ROTARY INSERT	---	SIC	ZA3750AR4	6
O	1	ROTARY COLLAR	---	316L	ZA3750A1R4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-157	1
R	1	STATIONARY INSERT	---	SIC	ZA3750BR4	7

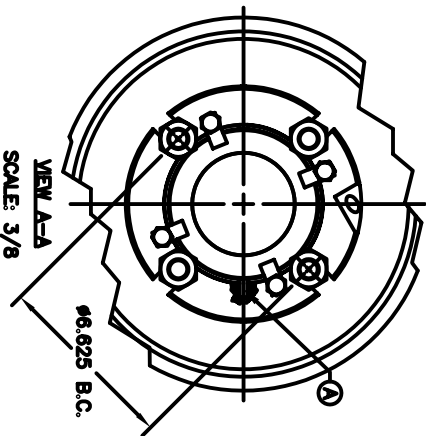
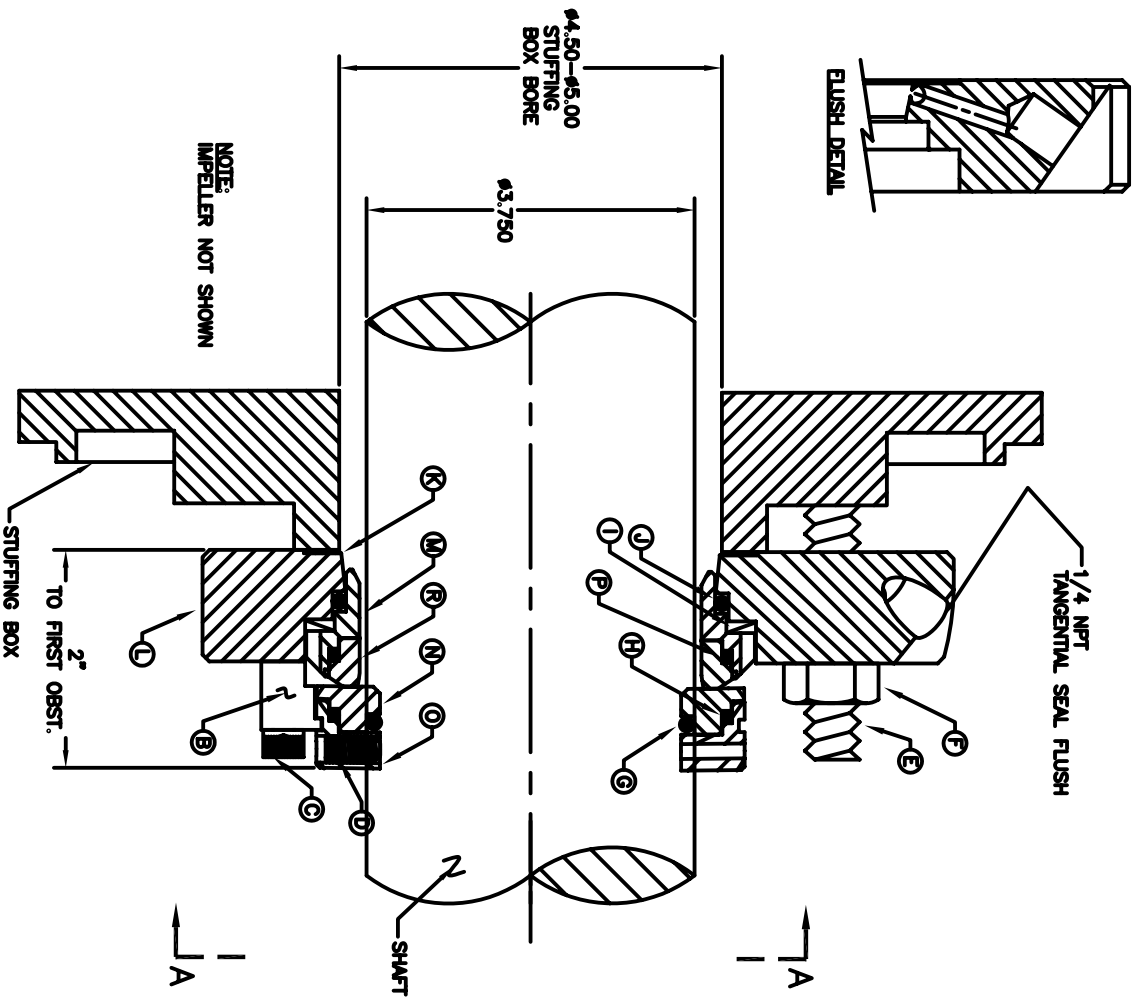
SEAL SIZE - 3-3/4

TYPE - ZN

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSTY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN3750R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	ZN3750R1	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-240	1
H	1	ROTOR MOUNT O-RING	---	VITON	-157	1
I	1	WAVE SPRING	---	17-7 PH	WS3750Z/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-243	1
K	1	4-1/2X5-1/8 GLAND GASKET	---	TEFLON	GZN3750GLD	1
L	1	ZN R1 GLAND	---	316L	ZN3750GR1	3
M	1	STATIONARY RETAINER	---	316L	ZAS750BR1	5
N	1	ROTOR INSERT	---	SIC	ZAS750AR4	6
O	1	ROTOR COLLAR	---	316L	ZAS750AIR4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-157	1
R	1	STATIONARY INSERT	---	SIC	ZAS750BR4	7

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O, P, R  
 REPAIR KIT CONSISTS OF: B, C, D, G, H, L, J, K, M, N, P, R



STUD/BOLT SIZE	1/2	5/8
MIN. BOLT CIRCLE	6-1/2	6-5/8



2230 STEWART ST. UNIT #6  
 STOCKTON CA. 95205  
 PHONE (209) 547-1965  
 FAX (209) 464-8140

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TITLE: ZN CARTRIDGE SEAL ASSEMBLY		REV	
DATE: 10/10/05	FLUSH	DRAWN BY: RE	DWG #: ZN3750R1
SHEET #: 1 OF 8		APPROVED: RE	
Date: 10/10/05		Date: 10/10/05	

REV	DESCRIPTION	BY	DATE



SEAL SIZE -- 4

TYPE -- ZN

## BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN4000R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-242	1
H	1	ROTARY MOUNT O-RING	---	VITON	-158	1
I	1	WAVE SPRING	---	17-7 PH	WS4000ZA/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-245	1
K	1	4-3/4X5-3/8 GLAND GASKET	---	TEFLON	GTZN4000GLD	1
L	1	ZN R1 GLAND	---	316L	ZN4000GR1	3
M	1	STATIONARY RETAINER	---	316L	ZA4000B1R4	5
N	1	ROTARY INSERT	---	SIC	ZA4000AR4	6
O	1	ROTARY COLLAR	---	316L	ZA4000A1R4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-158	1
R	1	STATIONARY INSERT	---	SIC	ZA4000BR4	7

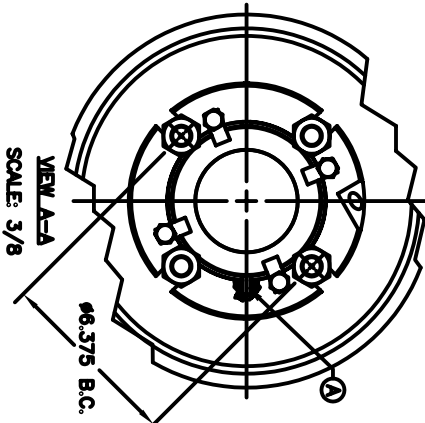
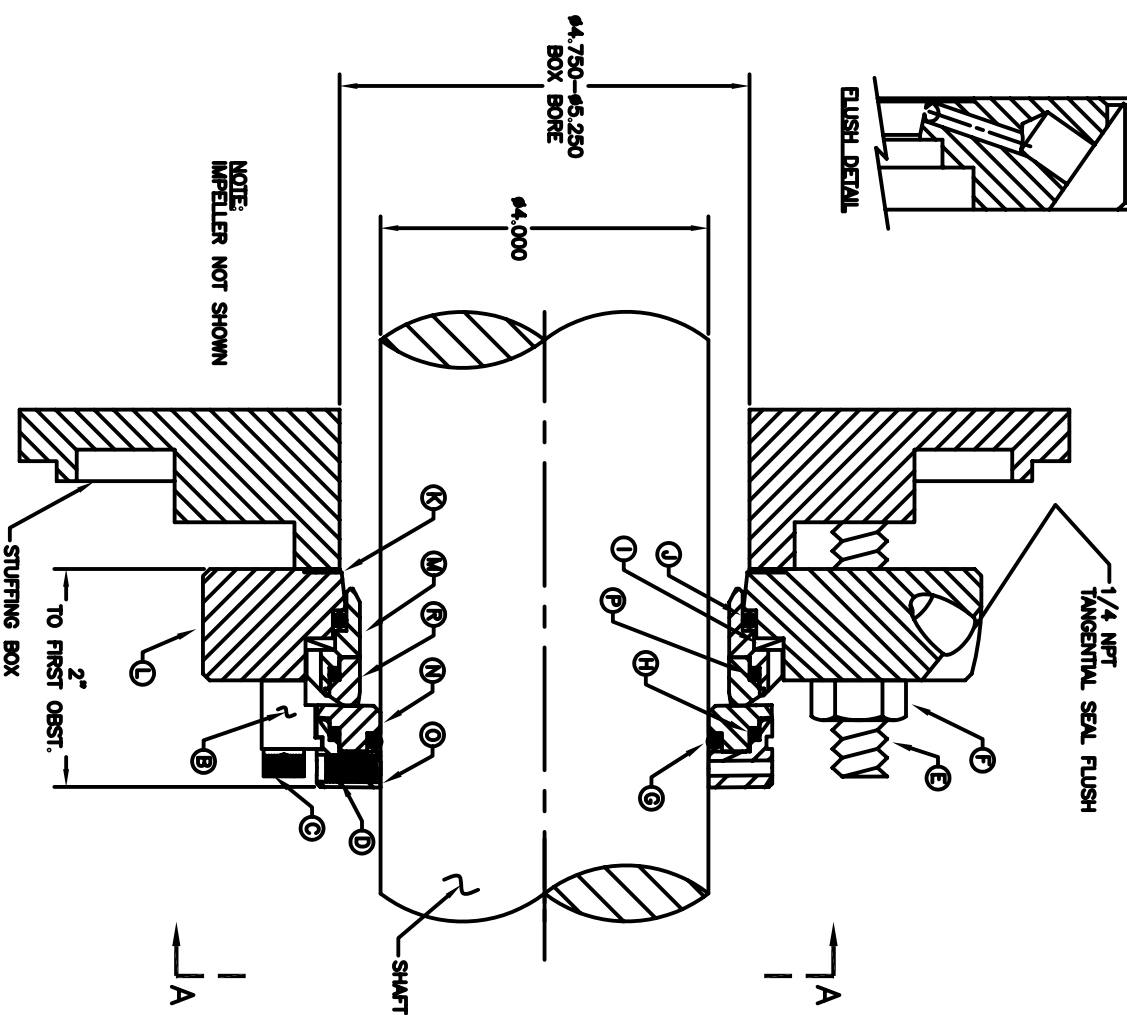
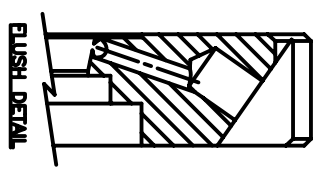
SEAL SIZE - 4

TYPE - ZN

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN4000R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-242	1
H	1	ROTIARY MOUNT O-RING	---	VITON	-158	1
I	1	WAVE SPRING	---	17-7 PH	WS4000Z/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-245	1
K	1	4-3/4X5-3/8 GLAND GASKET	---	TEFLON	GIZN4000GLD	1
L	1	ZN R1 GLAND	---	316L	ZN4000GR1	3
M	1	STATIONARY RETAINER	---	316L	ZN4000BTR4	5
N	1	ROTIARY INSERT	---	SIC	Z44000AR4	6
O	1	ROTIARY COLLAR	---	316L	Z44000AIR4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-158	1
R	1	STATIONARY INSERT	---	SIC	Z44000BR4	7

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O, P, R  
 REPAIR KIT CONSISTS OF: B, C, D, G, H, L, J, K, M, N, P, R



STUD/BOLT SIZE	1/2	5/8
MIN. BOLT CIRCLE	6-1/4	6-3/8

**ZM TECHNOLOGIES**  
 2250 STEWART ST. UNIT #6  
 STOCKTON CA. 95205  
 PHONE (209) 547-1965  
 FAX (209) 464-8140

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DATE: 11/7/04	GLAND STYLE: FLUSH	DRAWN BY: RE	DWG #: ZN4000R1	SHEET #: 1 OF 8	APPROVED: RE	Date: 11/7/04
TITLE: ZN CARTRIDGE SEAL ASSEMBLY	REV: ZN 4 <sup>th</sup>	REV: REV	REV: REV	REV: REV	REV: REV	REV: REV

REV	DESCRIPTION	BY	DATE

SEAL SIZE -- 4-3/8

TYPE -- ZN

## BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN4375R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-245	1
H	1	ROTARY MOUNT O-RING	---	VITON	2.5mmX130	1
I	1	WAVE SPRING	---	17-7 PH	WS4375ZA/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-250	1
K	1	5-1/8X5-3/4 GLAND GASKET	---	TEFLON	GTZN4375GLD	1
L	1	ZN R1 GLAND	---	316L	ZN4375GR1	3
M	1	STATIONARY RETAINER	---	316L	ZA4375B1R4	5
N	1	ROTARY INSERT	---	SIC	ZA4375AR4	6
O	1	ROTARY COLLAR	---	316L	ZA4375A1R4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	2.5mmX130	1
R	1	STATIONARY INSERT	---	SIC	ZA4375BR4	7

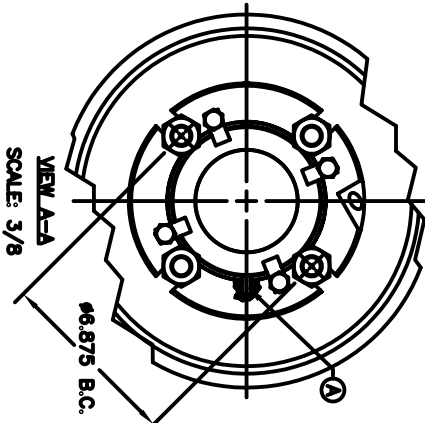
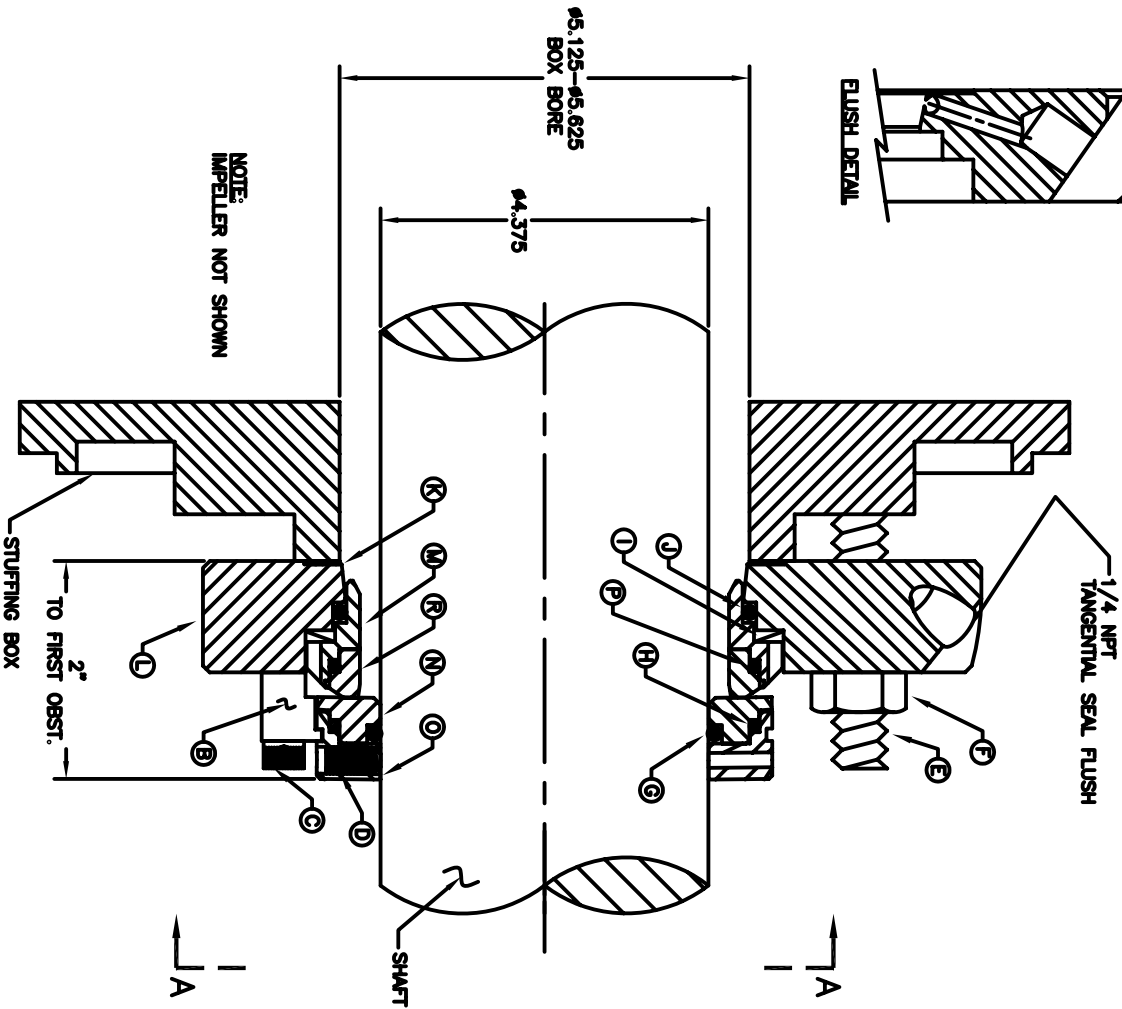
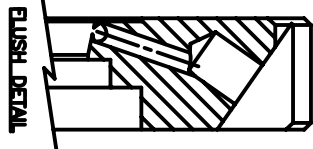
SEAL SIZE - 4-3/8

TYPE - ZN

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSTY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN4375R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-245	1
H	1	ROTIARY MOUNT O-RING	---	VITON	2.5mmX130	1
I	1	WAVE SPRING	---	17-7 PH	WSA375SZ/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-250	1
K	1	5-1/8X3-3/4 GLAND GASKET	---	TEFLON	GZNA375GLD	1
L	1	ZN R1 GLAND	---	316L	ZNA375GR1	3
M	1	STATIONARY RETAINER	---	316L	ZNA375BR1	5
N	1	ROTIARY INSERT	---	SIC	ZA4375BR4	6
O	1	ROTIARY COLLAR	---	316L	ZA4375AIR4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	2.5mmX130	1
R	1	STATIONARY INSERT	---	SIC	ZA4375BR4	7

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O, P, R  
 REPAIR KIT CONSISTS OF: B, C, D, G, H, L, J, K, M, N, P, R



STUD/BOLT SIZE	5/8	3/4
MIN. BOLT CIRCLE	6-3/4	6-7/8



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TITLE: ZN CARTRIDGE SEAL ASSEMBLY		REV	
DATE: 10/10/05	FLUSH	DRAWN BY: RE	DWG #: ZN4375R1
SHEET #: 1 OF 8	APPROVED: RE	DATE: 10/10/05	

REV	DESCRIPTION	BY	DATE
-----	-------------	----	------

SEAL SIZE -- 4-3/4

TYPE -- ZN

## BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN4750R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-248	1
H	1	ROTARY MOUNT O-RING	---	VITON	-164	1
I	1	WAVE SPRING	---	17-7 PH	WS4750ZA/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-253	1
K	1	5-1/2X6-1/8GLAND GASKET	---	TEFLON	GTZN4750GLD	1
L	1	ZN R1 GLAND	---	316L	ZN4750GR1	3
M	1	STATIONARY RETAINER	---	316L	ZA4750B1R4	5
N	1	ROTARY INSERT	---	SIC	ZA4750AR4	6
O	1	ROTARY COLLAR	---	316L	ZA4750A1R4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-164	1
R	1	STATIONARY INSERT	---	SIC	ZA4750BR4	7

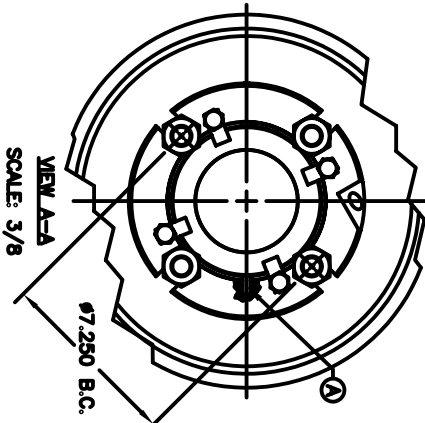
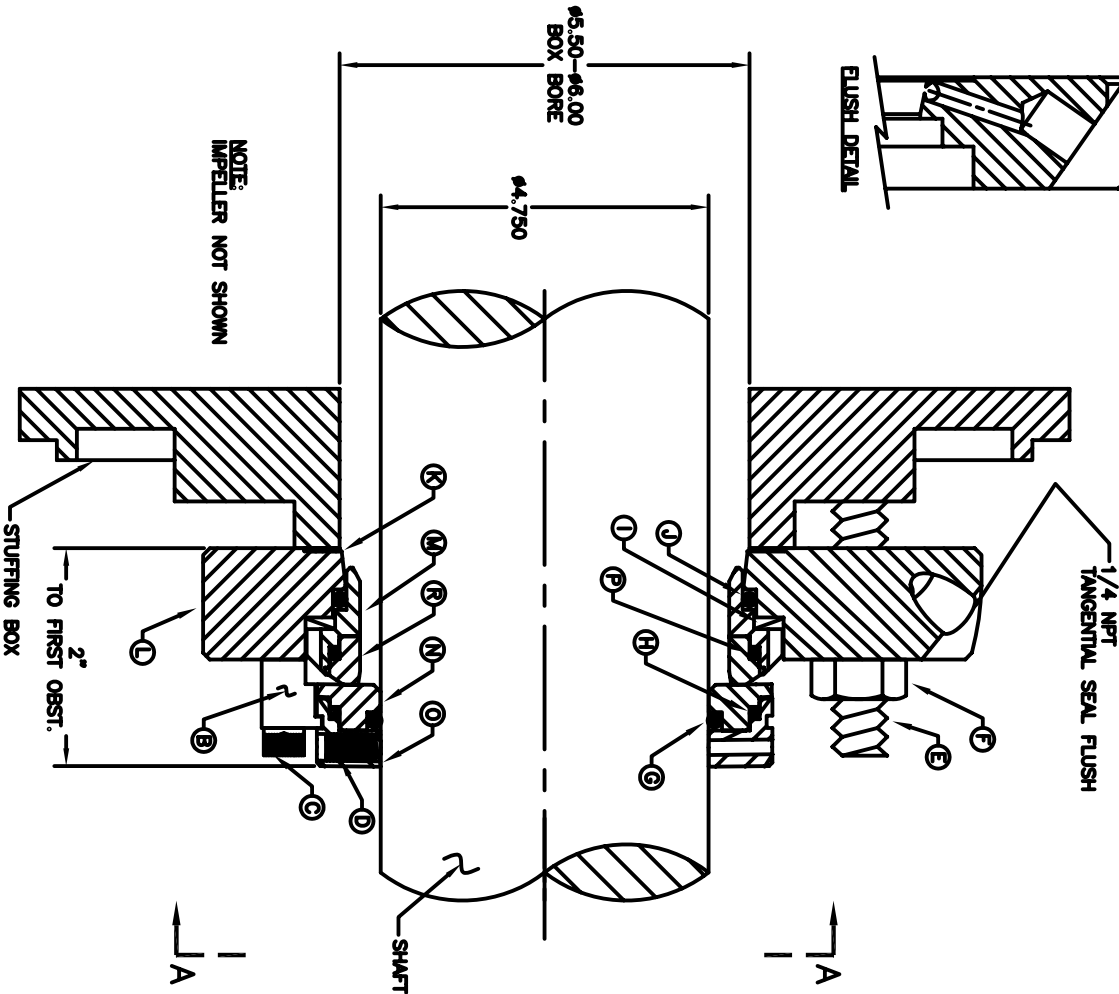
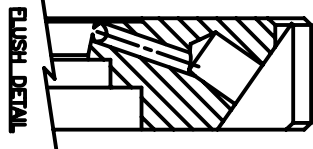
SEAL SIZE - 4-3/4

TYPE - ZN

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZN4750R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	SHAFT O-RING	---	VITON	-248	1
H	1	ROTOR MOUNT O-RING	---	VITON	-184	1
I	1	WAVE SPRING	---	17-7 PH	WS4750Z/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-253	1
K	1	5-1/2X8-1/8GLAND GASKET	---	TEFLON	GZN4750GLD	1
L	1	ZN R1 GLAND	---	316L	ZN4750GR1	3
M	1	STATIONARY RETAINER	---	316L	Z44750BR4	5
N	1	ROTOR INSERT	---	SIC	Z44750AR4	6
O	1	ROTOR COLLAR	---	316L	Z44750ATR4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-184	1
R	1	STATIONARY INSERT	---	SIC	Z44750BR4	7

SEAL KIT CONSISTS OF: B, C, D, G, H, I, J, K, M, N, O, P, R  
 REPAIR KIT CONSISTS OF: B, C, D, G, H, L, J, K, M, N, P, R



STUD/BOLT SIZE	5/8	3/4
MIN. BOLT CIRCLE	7-1/8	7-1/4



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DATE: 10/10/05	FLUSH	RE	DWG #: ZN4750R1	SHEET #: 1 OF 8	APPROVED: RE	Date: 10/10/05
TITLE: ZN CARTRIDGE SEAL ASSEMBLY	REV	REV	REV	REV	REV	REV

REV	DESCRIPTION	BY	DATE